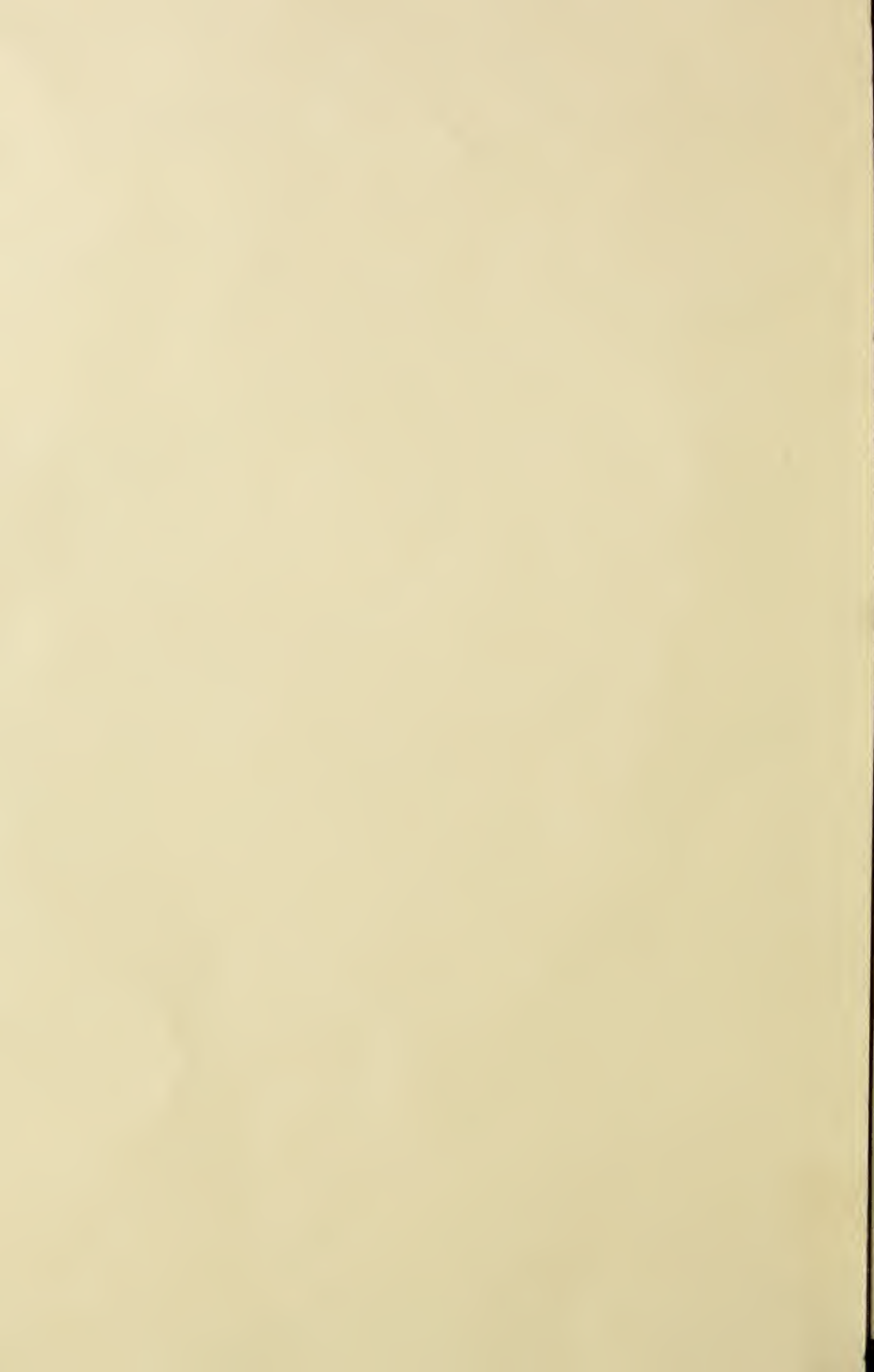


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THE MARYLAND FARMER:

DEVOTED TO
AGRICULTURE, HORTICULTURE,



LIVE STOCK
and RURAL ECONOMY.

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No. 6.

Curtailling Costs.

It is not at all likely that farm products, except in rare and abnormal conditions, will ever bring high prices again to first hands, that is, to the farmer. With eight or ten millions of farmers at work in such a country as this, and with increasing foreign competition in nearly all of the leading articles, it is not to be expected that the markets of the world will get so bare of any staple, or that the demand for it will become so phenomenal, as to send up the prices to extravagant figures. Farmers should not look for high prices, and should never base their calculations on the prices of this year or of last, but on the average of a long period of years. It is not to a high market that the farmer is to look for his profits.

Whence, then, is the farmer's living and reward to come? It is to come by curtailing the costs of production. The farmer must grow his tobacco or cotton at a little less per pound, his corn and wheat at a little less per bushel, his peaches and strawberries at a little less per crate, and his clover and hay at a little less per ton, than these things have cost him heretofore, if he would realize larger profits, and make more money by his calling. To arrive at the minimum cost of production per pound or bushel, should be the aim of every farmer.

How is this important end to be reached?

First, let the farmer take up each thing employed in production, item by item, such as land, labor, teams, implements, fertilizers, and the like, and consider how he may reduce the costs thereon. It is often the case that some of these things cost more than they ought to cost, and a great deal may be done, sometimes, by finding out just where the waste is, and stopping it. Farmers do not figure enough upon the costs of production. But, chief thing of all for the farmer to do, let him set about increasing the yield per acre, and thus by making more to the area reduce the cost per weight or measure. Looking carefully to each item of expense in the growing of a crop, let him look still more carefully to the producing capacity of his soil, and strive by thorough manuring and culture to bring it to a high power to produce full and perfect crops. The profits of farming are to be made, it seems to us, by pursuing something like the above plan.

Farm Work for June.

This is one of the busiest months of the year for the farmer, and especially so for the Planter. The tobacco crop must be pitched this month; the corn crop ought to be "laid by;" harvest and hay making and other important matters to be all done, and many of them to be done at the same time, allowing no delay

Tobacco.

This valuable crop, we again repeat, should be

planted as early as possible on rich, well prepared, highly manured land, and cultivated with care, guarded against its enemies and have sufficient labor to allow it never to suffer from neglect in any way.

Corn Cultivation.

No crop suffers more from neglect than corn; it is a cormorant feeder, grows rapidly, and impatient of the presence of weeds and grass, therefore requires rich soil, deep and clean preparation of the land, rapid working until it shades the land, when it should be left, if it is perfectly clean of grass. The whole working on good soil, may be done in four weeks after being planted if the ground had been first well prepared.

Late Potatoes and Root Crops.

These may now be planted, before the 15th at the farthest. Potatoes can be planted up to the last of the month, but it is better, to have planted them last month, in most seasons early planting is best.

Ruta Baga, Beets, Mangolds and Carrots may be planted this month before the 10th, but it is quite late for all except the first, and from 10th to 20th of the month is best time for ruta bagas or swedes.

Millet and Corn Broadcast.

These important helps for soiling or supplying a deficiency in the hay crop, can now be sown.—Either crop will repay the farmer for his labor whether he has a supply of forage or not.

Clover.

Clover requires great attention to make it into good hay, but when it is cured properly it is the best hay for sheep, and for milch-cows it is very superior, if cut up, moistened and sprinkled with rye or corn meal and wheat bran.

Orchard Grass and Timothy.

These, as well as all grasses, should be cut when just in bloom. They are easily cured and bring high prices. Indeed we hardly know of any crop which pays so well as a good hay crop, well managed, and near market, or conveniently transported by rail, or water. It is remarkable, that so little attention is given to the growing of grass, when it requires so little labor to secure the crop, and when it brings always a good price, and always in demand. In connection with this matter we call attention to the

MEASUREMENT OF HAY.

Much has been written upon this subject, and a contrariety of statements made, but we think it is because a proper allowance has not been made for the different kinds of grass, the order of the hay, and the degree to which it had set-

tled when the different admeasurements were made and tested by the scales. As a sufficient approximate rule for the guidance of the farmer, we should say with *Waring*, author of *Farmers and Mechanics' Manual*, from 15 to 18 cubic yards will give a ton of hay. The former for well settled dry Timothy, and the latter for lighter grasses, in like condition. When a farmer first puts his hay away in the mow, stack or rick, he can be sure that he has one ton of Timothy or Orchard grass for every 18 cubic yards, and the like amount for every 21 cubic yards of Clover. This is near enough for his guidance in ascertaining whether he has any, and how much, for sale, and a safe rule for regulating his demands, if he sells by the stack, rick or mow, without the trouble of weighing.

Harvest.

Before we shall communicate with you again, the grain crops, wheat and rye will have been generally harvested. Let us advise that everything necessary for the dispatch of harvest should be provided before it is actually upon you. Once there was a great discussion as to the proper time when wheat should be cut. But it has been long since settled by science and experiments, that to make the best of flour, have the wheat weigh more, and actually measure more, it should be harvested before fully ripe, that is when just reaching the doughy state, some grains doughy, and some in the milk. Professor *Norton* says, "grain in the milk has but little woody fibre; nearly everything is starch, gluten, sugar, &c., with a large percentage of water," and concludes that to be the state in which it ought to be cut.

Salt.

Stock of all kinds require a great deal of salt at this season of the year, and they should be supplied not only with salt, but ashes and a little lime. A good plan is to get the large rock salt, and put a boulder of it on a poor place, and the spot will be rich by the time the stock have licked away a 40 pound lump.

Buckwheat.

A few acres of buckwheat might be sown for family consumption and sale. With the help of a bushel of plaster and three of salt, mixed and applied to the acre, a good crop will be produced on quite poor land.

Agricultural Societies.

Now is the time to think what kinds of vegetable products and what stock you mean to exhibit so as to swell the attractions of your County and State Societies, and give encouragement by your own exertions to those institutions which

have done and are doing so much toward the progress of your calling or occupation. You will be helping your own interest in thus aiding the Society. Select some crop or vegetable or animal and pay special attention to it, that it may bear off the ribbon, as the best of its kind, or you get the premium for the heaviest product per acre, by your superior skill and industry. Others will be stimulated by your efforts and encouraged by your success and a silent enterprise will permeate throughout your neighborhood, until a new order of things will spring up and bear fruit for the good of the whole community and the advancement of Agriculture.

Stock.

Look well to all the farm animals. See that they have good pasture, clean water and plenty of shade in the pastures. Salt and ashes always accessible.

Garden Work.

This is a busy and important month for the gardener. Every bed should now have something growing or sown in it. Not a weed or sprig of grass should be seen. It will keep you busy, but in the abundance of the products you will reap your reward.

Cabbage Plants.—Plant out some for early autumn use, Winningstadt, Drumhead Savoy, &c, and if the weather prove favorable you may plant out your winter's supply, the last of the month; it will not be too early, and perhaps when July comes you will not have seasons favorable. Let there be a full supply, for after all, cabbage is next to the potato as a main product for the table. Do not plant them where cabbages grew last year, or the year before, and be sure the ground is rich. Work them well, and use plaster freely on them. Seeds of the later kinds may now be sown.

Melons and Vines.—Thin them to two or three in a hill, keep the land light and clean. Dust often with soot, sulphur and plaster to drive off the bugs.

Cucumbers.—Plant a sufficiency for pickling and late use. Plant also the *Gherkin*. Treat them as recommended for melons.

Onions.—Keep these clean, and if they seem disposed to run to seed; break out the centre stem, or bend the tops down.

Corn.—Plant some corn for late use.

Beets.—Sow the long Blood Beet for winter use. They will be tender and nice.

Parsnips and Carrots.—Those growing keep

clean and land stirred. It is not too late to sow more if you require it.

Peas.—Sow Marrow peas for fall use.

Beans.—Plant a few string beans for a succession.

Radish.—Sow at intervals the *White Spanish Large Turnip* or *Chinese Rose*.

Tomatoes.—Set out your main crop, and be sure to have a large supply. You never can have too many of this wholesome and delicious vegetable.

Strawberries.—As soon as the crop is gone, work the beds, trim and thin the vines, and keep grass and runners down, except such vines as you wish to propagate from; these you can water, if a dry time, and fertilize with manure water, so as to force a supply of large young plants for the autumn or spring planting.

Celery.—Plant a few rows for early blanching.

Lettuce.—Plant out some Coss Lettuce.

Endive.—Sow the seeds of this nice salad.

Spinach.—Sow a few rows. It comes in nicely between early and late cabbage.

Asparagus Beds.—Keep these clean, and let the asparagus grow, but do not let it bear seed, unless you have a reason for so doing.

Salads of all sorts may now be sown.

Herbs—Sweet and Medicinal.—May be transplanted from the beds, to where they are to grow, if the plants are large enough. They will be in bloom and yield a fine supply by October.

Late Crop Sweet Potatoes.

Last year we succeeded so well with a late crop of sweet potatoes, that we wish to inform the reader how we did it.

After digging off the Early Rose potatoes in July, ridges were re-formed in the same place occupied by the old ridges, and pieces of vines about a foot in length were cut from the vines of the early sweet potato patch, and stuck out on the new ridges at about sixteen inches apart. The Irish potatoes had been well manured with plenty of strong and rich woods mould in the trench, and 200 pounds of L. & R. phosphate to the half acre patch. The soil was sandy, mellow, and in fine condition for sweet potatoes without the addition of any more manure, but ashes were scattered liberally along the rows before the ridges were thrown up.

The weather was favorable at setting time, and nearly all of the cuttings, or slips, grew off finely. Indeed, it is no trouble to

get a sweet potato vine to live and grow. Only give it a loose soil and a little moisture, and no more is required. Vines live better than the original drawers, for the reason that the latter have been forced and are tender, while the vine is strong and is not subject to cool nights that so much retard tender crops in the early spring.

Despite the extreme dryness of the latter part of the summer of 1884, we found our crop of late potatoes at digging time to be first rate, almost equal in fact to the early crop. In some respects we like the late potatoes the better; there is much less vine in the way of digging, the potatoes are more chubby and grow all in a bunch, so that you can lift the whole hill out by the parent stem, and the potatoes are smoother and fairer than the early. The early potatoes run too much to vine, and waste strength in putting forth roots at the joints. The late crop does not do this. All the powers of the plant go to form the potatoes. The yield, while less than the early, is fair, and considering that we make two crops on the same land in this way, the cost is very little.

B. W. J., *Va.*

For the Maryland Farmer.

Cultivated Crops in the Orchard.

JOHN M. STAHL.

I am convinced that it is best to keep the ground of young orchards in cultivated crops. It is desirable that the young trees make a rapid growth; and trees, like wheat or corn, grow best in stirred ground, because from loose, pulverized soil their roots can obtain food the most easily. Young trees are more injured by drought than are old trees, because the roots of the former do not penetrate so deep and may not reach moist ground. Stirring the soil lessens the effect of a drought, and the stirred stratum acts as a mulch over the soil underneath. Worms, insects and underground pests do not infest a young orchard when the ground is cultivated as when it is not. The larvæ are brought to the surface by the repeated stirring, and the exposure proves fatal to them or they are devoured by the birds and the barnyard fowls. Field mice, which in some sections create such havoc in uncultivated orchards, are almost altogether stopped in their ravages by keeping the ground in cultivated crops. I

believe the majority of authorities are in favor of keeping old orchards in grass; and I have my old orchard in blue-grass and clover, and it does very well. But when a young tree is put out to replace one that has died, I keep the ground stirred for some distance around the young tree, to increase its growth and stop the ravages of the pests I have spoken of, which always prefer to work upon young trees, and of course do them the most damage.

Some cultivated crops are better adapted to the orchard than are others. While the trees are very small it is not good policy to plant broom corn, sugar cane, or corn in the orchard, as these crops will shade the young trees, and prove injurious to them. Also, crops which can be cultivated altogether or mostly with horse power are best grown elsewhere, as the trees are liable to be injured by the horses, especially if the work must be entrusted to hired men. Hoed crops are best adapted of all to the orchard. I have grown Irish potatoes for many years in young orchards, and always with the best results. The potatoes do not shade the body and branches of the trees, thus occasion no injury; and they do shade the roots, thus doing good during the long, hot days of summer. The early cultivation of potatoes is best done with the hoe, hence there is no temptation to use horses; and it is better to use but one horse when doing the later work, and one horse is so easily managed that there is no need of the trees being injured. Potatoes are a crop that requires thorough cultivation, and this is also better for the trees. Any other hoed crop is equally good, provided it is given as thorough culture. I have tried small fruits in young orchards, and am well pleased with the results of the experiment. Half of one of my young orchards is now planted in black-cap raspberries, and these I give frequent cultivations till after they have blossomed. This work is done by horse power, but as I can use only one horse I find no difficulty in saving the trees from injury. I have not tried blackberries, but suppose they would do equally well. A young orchard makes a good garden spot. All sorts of vegetables can be grown in it to advantage, even after the trees have acquired a considerable size, as some garden crops do best in the shade.

It must be remembered that when orchard ground is put in some farm or gar-

den crop that it is made to support two crops and will be rapidly despoiled of its fertility unless heavily manured. We make the mistake of rarely manuring orchard ground, and many orchards which are barren are so simply because the ground is barren. Orchard trees, whether by reason of their growth or fruiting, are greedy eaters, and the ground upon which they stand should receive more manure than wheat or corn land. When, in addition, the ground is made to sustain a hoed crop, generally a greedy feeder also, the manuring should be very heavy indeed. Barnyard or stable manure should not be applied to orchard land unless the land is cultivated; for when placed around the base of the tree, as is the common practice, it affords a convenient harbor and breeding place for insect and other pests. Wood ashes, leached or unleached, are a splendid fertilizer for the orchard. So is lime, mortar or plastering. I always get all the old plastering I can for my orchard.

QUINCY, ILLS.

To Forecast the Weather.

Every man who will take the trouble to observe the following atmospheric points will be able to forecast the weather for his section. He will find it to be of much advantage and profit to him for the time given to the study and observation. The general rules are as follows:

1. When the temperature falls suddenly there is a storm forming south of you.
2. When the temperature rises suddenly there is a storm forming north of you.
3. The wind always blows from a region of fair weather to a region where a storm is forming.
4. Cirrus clouds always move from a region where a storm is in progress to a region of fair weather.
5. Cumulus clouds always move from a region of fair weather to a region where a storm is forming.
6. When cirrus clouds are moving rapidly from the north or northeast there will be rain inside of twenty-four hours, no matter how cold it is.
7. When the cirrus clouds are moving rapidly from the south or southeast there will be a cold rain storm on the morrow if in summer, and if it be the winter there will be a snow storm.

8. The wind always blows in a circle around a storm, and when it blows from the north the heaviest rain is east of you, if it blows from the south the heaviest rain is west of you; if it blows from the east the heaviest rain is south of you; if it blows from the west the heaviest rain is north.

9. The wind never blows unless rain or snow is falling within 1,000 miles of you.

10. Whenever heavy white frosts occur a storm is forming within 1,000 miles north or northwest of you.

ED. MARYLAND FARMER.

With much pleasure I have read the enclosed letter of the eminent and world wide known experimenter in agricultural pursuits in which you will find my own views so often expressed through your columns that the artificial application of nitrogen does not pay. Coming as it does from one so well known throughout our country surely it is calculated to cause our farmers to pause and ask the question whether they have not been paying too much for nitrogen and too little regard to phosphoric acid and potash. With nitrogen the case is entirely different from the immovable elements, such as phosphorous, potash, magnesia, lime etc. Nitrogen, ammonia or nitric acid belong to the movable elements like carbonic acid, the great and most important plant food, and is constantly circulative and finding a resting place in the soil when in proper physical condition; hence, no wonder that Sir. J. B. Lawes, for thirty six years in succession raised large crops from the use of phosphoric acid and potash without a pound of nitrogen, and as he says, secured one hundred pounds of it per acre from his crop of vetches.

Like results I have obtained for the past fifteen years on the well known poor lands of Rock Hall in the shape of timothy, clover, orchard grass and red top and for the past fifteen years not a pound of purchased nitrogen has found its way in my land. Kainit and phosphoric acid were found to be the absent element and they seem to be the main ones as lime and plaster never seemed to be of the least use. At this time my fields of grass are looking beautiful and notwithstanding the very wet and cold winter I do not think I have ever had a better prospect for hay, and yet on these fields many of your readers know clover and timothy would not have sprouted a few years

ago. All now in grass have been mowed for several years, and one field since 78.

A. P. SHARP.

The following is the letter of Sir J. B. Lawes, published in the *Rural New Yorker* on Complete Fertilizers, referred to by our correspondent A. P. Sharp.

I believe that what you call complete artificial manures are a mistake, or, in other words, crops entirely grown by ingredients furnished in chemical manures, are grown at too great a cost. You grow generally fourteen bushels of wheat. There is no difficulty in doubling this yield by means of the application of a certain amount of potash, phosphate and ammonia; but at the ordinary price of these ingredients the wheat would cost more than it would sell for. An artificial manure can be used with profit only when it furnishes to the soil a certain part of the food of the plant, the soil supplying the residue. If you look at the result of our experiments you will find that we have grown for forty years in succession thirty to forty bushels of wheat, and forty to fifty bushels of barley per acre by means of artificial manures, one of the most essential ingredients in them being ammonia and nitrate, and yet I do not think that I ever advocated the use of these costly substances in the States. I am constantly asked by your farmers how to grow more produce, and I generally say if you have a demand for animal products, feed your stock with cotton meal or cotton cake; if you have no demand for meat grow clover, or, if in the south, cow peas; plough the crops into the land. You will get more ammonia by such a process than you could purchase for twenty dollars.

A little plaster, kainit or superphosphate, has a wonderful power of increasing the growth of these crops; on some of my land which has received no manure containing ammonia or nitrate for 36 years, I grew a crop of vetches, or tares, which contained over 100 pounds of nitrogen per acre. I used potash and phosphate. These 100 pounds of nitrogen represent 120 lbs. of ammonia. You know better than I do how much you would have to pay for 120 pounds of ammonia. We can grow crops, so far as they are grown by means of artificial manures, cheaper than you can, and we can, of course, obtain a better price for our grain. Low prices are not necessarily to be met by increased production. A few

years ago I read a paper on this subject before a farmers' club, and was much found fault with by those who were urging that the best way to farm was to double your crops.

Deer Creek Farmers' Club.

Planting and Working Corn.

The regular monthly meeting of the Deer Creek Farmers' Club was held last Saturday at the farm of Mr. R. John Rogers, near Bel Air. In the absence of the President Mr. Johns H. Janney was called to the chair; Mr. H. Spalding, Secretary. The timely topic, "The Corn Crop," was talked about.

Mr. Rogers said the first considerations in raising a large crop of corn are good ground, good fertilizers and good tillage. He preferred to plow late in the winter or early in the spring—early enough for the ground to get some freezing afterwards. This, he thought, helped to get rid of some of the insects that injure the corn. If land is thin, shallow plowing is best, it being a disadvantage to turn up much clay on thin land. Good land will bear deeper plowing, and from 6 to 7 inches is a proper depth. Corn should not be planted until the ground is reasonably warm. After being plowed the ground should be worked again and again until you are ready to plant. If planted about the middle of May it will come up in a few days and there is then not so much danger from insects. From the 5th to the middle of May is a good time to plant. Early planted corn is likely to be injured by drought. The mode of planting would depend on the condition of the land. On land of ordinary quality he mostly checks his corn, but where the land is good he drills it.

Mr. John Moores preferred to plow 8 inches deep on good land and 6 inches on thin land. If he had his choice of time he would rather plow in February or early in March and plant from the 1st to the 10th of May. If put off until the middle of May a rainy spell may intervene and planting be too late. Mr. Moores plants both white and yellow corn, the advantage being that the yellow corn ripens first and the crop can be harvested with the regular farm force. If only one kind is planted it all ripens at the same time and it takes a big force to cut it up. His method of planting

is to run out the rows, sow bone, fill up the rows with a harrow or cultivator, so that the row can be seen as a drill mark. By this plan the clods are plowed out of the row and the harrow or cultivator replaces them with fine earth, making a good bed for the seed. He drills $3\frac{1}{2}$ feet wide, leaving the corn one foot apart in the rows. Drilled corn can be thinned any time, even when as high as a man's shoulder. By that time you can see which are the best stalks to leave.

Wm. Munnikhuysen was decidedly opposed to thinning corn, for the reason that replanted corn seldom comes to anything. In the first place he picks out all his seed corn and sets the drill to drop one grain every 12 or 15 inches. It is a waste of labor to plant it thickly and then have to pull it out. He had raised 18 barrels to the acre without thinning. Taking it all in all the best time to plow is when the ground is fit in the spring. He prefers white to yellow corn, because it stands the drought better and more of it can be raised to the acre. Yellow corn, however, is a better feed and does not get as hard as white corn. Sugar corn is the best feed that can be given to stock and it might pay to raise it for that purpose.

Wm. F. Hays says he drills thickly and thins to from 15 to 18 inches in the row, preferring thinning out to replanting. If all is planted at the same time it grows alike. Replants are generally choked out by the first planting. He plants yellow corn entirely. He is not much bothered with suckers, and does not believe there is any advantage in pulling them off.

Mr. Rogers said he suckers his corn when working it while it is small.

Mr. James Lee said he never pulls off the suckers, while Mr. Moores always does.

R. Harris Archer spoke of the importance of having good seed, and if the seed is good it will not rot in the ground no matter how early it is planted or how wet the season is. Seed slightly damaged may come up under favorable circumstances. Seed corn ought to be picked out when the corn is husked. From the 20th of April to the 1st of May is a good time to plant. The advantage of early planting is that it gives two weeks time before the corn needs working, during which something else may be done on the farm. If it can be drilled without first running out a furrow it is best

and the fertilizer should be sowed no matter where it goes.

Mr. Archer, resuming, said he seldom thinned corn, except when hoeing it. It needs one good hoeing. He plants one foot apart, on good ground, the rows $3\frac{1}{2}$ feet. He would like the ground to freeze a little after it is plowed.

James Lee prefers plowing early in the spring. The rows should be $3\frac{1}{2}$ feet apart and the corn not less than 15 or 16 inches in the rows. Corn is generally too thick. He rolls the ground after planting, by which means the corn comes up sooner and can be worked earlier.

S M. Lee said his plan is to plow at the first opportunity, from the middle of November to planting time. His time of planting is when the ground is dry enough after the 15th of April. He had never known any sound seed planted after that time to rot. The selection of seed is important. He had found that seed from corn dried, matured and cut up before cold weather came on was better than that left standing late. The variety of corn has little to do with the yield, this being dependent upon the soil and the character of the corn.

E. P. Moores plows as early as possible. It is a great thing to thoroughly prepare the ground before planting. It kills the grass, the corn comes up better and does not require so much working afterwards. From the 1st to the 10th of May is a good time to plant. He runs out rows $3\frac{1}{2}$ feet apart, sows fertilizer in the row, then runs a corn coverer over it, and drills the mark left by the plow. He was not much in favor of replanting. If badly missed, harrow the ground, mark it out and drill it again. He leaves the corn 12 to 14 inches in the rows. It should be cut up a little green.

E. B. Swartz said he liked to plow as early as possible, particularly sod ground, and to a depth of 6 or 8 inches. The ground should be thoroughly worked. Unless the ground is cloddy he would prefer not to roll it until the corn is planted. He applies the fertilizer with a wheat drill, marks out the rows and follows with the corn drill. If the fertilizer is broad cast a sufficient quantity drops in the rows to start the corn and the ground is better prepared for wheat afterwards. Fodder should be cut before it is thoroughly ripe.

Adjourned to meet at the farm of Mr.

Wm. B. Hopkins, May 23d. Subject, "Cutting and Curing of Hay."—*Ægis and Intelligencer*.

Economic Horse Feed.

Ground grain is the cheapest form in which nutriment can be given to working horses. But to produce the best effect it should be mixed with cut hay, not to give greater bulk, for this the horse's stomach does not require, but to make the food more porous in the stomach, so that the gastric juices may more freely work through it. Meal alone, especially of corn which scarcely has any chaff, will compact in the stomach and be less easily digestible. The heavy chaff of oats is one of the reasons why this grain is so valuable for horse feed. Another is that the oat abounds in nitrogenous or muscle forming food, and is therefore worth more per pound where strength is required than corn or oil meal, whose chief constituents are carbonaceous or fat producing. There is much more virtue in bran or wheat middlings as food for working horses than is commonly supposed. In many places bran is sold as cheaply by the ton as hay. For giving strength it is more valuable pound for pound, and it is nearly as good as cut hay as a divisor of more concentrated nutriment. Wheat middlings are also excellent, but they need to be mixed with a larger bulk of cut feed to insure against impaction in the stomach. If hay cannot easily be obtained straw will answer as a divisor, though the quantity of hay absolutely required is so much less than is generally used that a very little will suffice for a horse's food during the working season provided grain or meal can be had in abundance.—*Ex*.

TWENTY YEARS' INCREASE OF AGRICULTURAL PRODUCTIONS.—Mr. Dodge, statistician to the Department of Agriculture, finds that during the two decades from 1860 to 1880, the value of meats produced in the United States increased from \$300,000,000 to \$800,000,000; of corn, from \$360,680,878 to \$694,818,304; of wheat, from \$124,635,545 to \$436,968,463; of hay, from \$152,671,168 to \$409,505,783; of dairy products, from \$152,350,000 to \$352,500,000; and of other products in proportion, more than doubling the aggregate of

value, increasing it from \$1,600,000,000 to \$3,600,000,000 in round numbers. With good prices, the current production of the United States can be little short of \$4,000,000,000.

STATE FAIRS AND SHOWS WILL OCCUR THIS YEAR AS FOLLOWS:—

Delaware—Dover, September 23-October 3.
 Illinois—Chicago, September 14-18.
 Illinois Fat Stock—Chicago, November 10-19.
 Indiana—Indianapolis, September 23-October 3.
 Iowa—Des Moines, September 4-11.
 Kansas—Topeka, September 14-19.
 Kentucky—Lexington, August 25-29.
 Massachusetts Horticultural—Boston September 15-18.
 Minnesota—St. Paul, September 7-12.
 Minneapolis Industrial—August 31-September 5.
 Nebraska—Lincoln, September 11-18.
 New York—Albany, September 10-16.
 Ontario Provincial—London, September 7-12.
 Pennsylvania—Philadelphia, September 23-October 7.
 Rhode Island—Providence, September 21-25.
 St. Louis Exposition—September 9-October 24.
 South Carolina—Columbia, November 10-13.
 Vermont—Burlington, September 7-11.
 West Virginia—Wheeling, September 7-12.
 West Virginia (Central)—Clarksburg, September 22-25.
 Wisconsin—Madison, September 7-11.

From Eastern Maryland.

EDS. COUNTRY GENTLEMAN—On the night of the 3d we had a thunder storm, followed by a copious rain, and next day the wheat and grain fields dropped their winter mantle, and turned out with a new and green suit, and now our farmers feel somewhat encouraged by the prospect of some wheat. The previous appearance was so discouraging that some contemplated plowing up the wheat for oats and corn. One field I was sure was gone, but a second life seems to have possession of it, and it looks now as if a fair crop would be realized. The fruit also seems in motion, but owing to the little growth of new wood last season, it is not thought by many that there will be a large crop. A large grower from the lower end of the county where the crop seldom fails, thinks that the Late Crawfords, as well as Early, are badly injured, and the Smock and Salway will be about half a crop on a small growth of wood.

I have often observed the rapid development of chlorophyl (the green coloring of leaves) after a thunderstorm, and as the peculiar blue principle is a nitrogenized compound, which, mingling with the yellow, gives the rich green to the foliage, the question may be asked whether an extra

supply of ammonia did not enrich the rain after the thunder storm. To enter more fully into the subject, the inquiry might be farther asked, what caused the thunder, and its solution may explain the supply of ammonia or nitric acid found in the rain after a storm. As is well known, the air is a mixture of 78 parts nitrogen and 22 oxygen. If by any electrical action the two gases are induced to combine together, three compounds may appear; first, nitrous acid, 14 parts nitrogen, and 24 parts oxygen; second, hypernitrous acid, 14 parts nitrogen and 32 oxygen, and thirdly, nitric acid, 14 parts nitrogen and 40 oxygen. The sudden formation of either of these acids in the atmosphere will explain the theory of thunder. Again, if by electrical action the suspended water in the air were decomposed, *i. e.*, hydrogen and oxygen separated into a gaseous or normal state, and three parts of hydrogen should suddenly unite with 14 parts of nitrogen, ammonia would suddenly come into full view, followed by a clap of thunder, and the falling rain would quickly carry this ammonia to the hungry grass or grain. Any one who is familiar with the violent report following the sudden combinations of the gases in a soap bubble, will fully appreciate what a violent report would follow from the combination of a few pounds of hydrogen and nitrogen, or oxygen and nitrogen. As both of these compounds of nitrate ammonia (nitric acid and ammonia) are found in rain water, the most concentrated form of nitrogen is presented to the plant, without the roundabout way of getting it through old leather, or old hair and wool. —A. P. S., *Rock Hall, Md.*

Encouragement for Silk Culture.

We have received circular No. 9, of the Department of Agriculture, in reference to the purchase of silk-worm eggs for distribution during 1886. To those interested in this comparatively new industry for our country, it is an important circular, and we wish we could give it entire; but those who would obtain all the information from the best sources, should address C. V. Riley, entomologist to the Department of Agriculture, Washington, D. C., when all instructions will be forwarded promptly to

those who have the eggs to sell; or who propose to raise them for that purpose. The present circular says: "So far as found practicable the eggs will be purchased of American producers. There are certain precautions, however, that must be taken to insure purchase. Eggs of improved races only (preferably of the FRENCH or ITALIAN YELLOW RACES,) will be bought and the producer should send one or two samples of pierced cocoons with the eggs." It is important, too, that perfect health should have characterized the stock from which the eggs are produced from the very first stages of growth during this year, for the stock will be critically examined, as well as the eggs, by the government entomologist. The price to be paid when approved and accepted will be \$2.50 per ounce.

Growing Potatoes.

The manufacture of potato starch in Aroostook county, Maine, has increased greatly in the seven years past, the output of last season being estimated at 7,000 tons, or 14,000,000 pounds, which amount, at $3\frac{1}{2}$ cents a pound, is worth \$490,000. At a half cent advance, for which many manufacturers are holding stocks, the value would be \$560,000. On an average about 9 pounds of starch are obtained from a bushel of potatoes, or a ton from 225 bushels. To manufacture 5,000 tons of starch would require 1,575,000 bushels of potatoes. The average price obtained by the farmers at the factories is 20 cents per bushel, which on the above number of bushels amounts to \$315,000, leaving to the manufacturers for the cost of manufacture and profits at $3\frac{1}{2}$ cents per pound, \$175,000, and at 4 cents per pound, \$245,000.—*Industrial Journal.*

If the farmers of Maine can afford to sell potatoes at 20 cents, we would suggest the particular attention of Maryland farmers to this branch of farming, where much better prices can be realized.

Subscribe for the MARYLAND FARMER, with a valuable premium, one dollar per year in advance.

Experience with Ensilage.

Col. Richard M. Hoe of New York favors the *Country Gentleman* with the following report from the Superintendent of his farm of sixty acres at Brightside in the 23 ward of that city. The cattle are now, Col. Hoe writes, in fine condition, after being fed on ensilage all winter. The report is as below :

Col. Richard M. Hoe—Dear Sir : In compliance with your wish, I have written out a history of the experiments which, under your directions, I have made with ensilage fodder.

In the fall of 1879 you built your first silo under the barn floor, dimensions, about 20 feet deep, 20 feet long and 10 feet wide. The walls were composed of stone and Portland cement, 22 inches thick, faced with a mortar, $\frac{1}{2}$ Portland cement and $\frac{3}{4}$ sand. The bottom, after thorough drainage, was concreted.

The silo not being completed in time to ensilage the corn planted for that purpose, we decided in putting a quantity of after-grass into it, that we had at that season. Commencing at it on a Friday, and not finishing on Saturday, leaving it exposed and unweighted over Sunday, Monday morning the grass was four feet higher than when we left off on Saturday, fermentation having effected it so much. We came to the conclusion it would be imprudent to put fresh grass on top of that fermented mass. We gave it no more attention until winter, when on clearing out the silo we found a black decomposed mass, 6 to 8 inches deep, all over the surface. What remained under seemed perfectly sound and juicy, and would now be considered a fair sample of ensilage. Now, what surprised me was, why it did not all become a decomposed mass, when there was no pressure? My impression then and now is, that the mass on top formed a seal and compression. I also think that the sound portion did not heat very much.

We took it out during the winter, and covered it over in the manure heap so that the cattle would not get to it. We failed in that point; attracted by the smell I suppose, they dug into the manure heap with their horns till they found it, and seemed to eat it with a relish. I allowed this, and watched the effect, found it no way injurious, but was surprised at getting an in-

crease of milk and a higher color to the butter.

In 1880 we filled the same silo with the produce of $3\frac{1}{4}$ acres, planted with southern corn. Some I planted in rows three feet apart, and some two feet. The planting was done by the Albany Corn Planter, adjusting it so as to drop 15 grains per foot. The close planting proved the best fodder, being a much finer stalk, with more leaves. Yet the yield did not amount to more than what was planted three feet apart. While the corn was growing, we tasted of the stalk at different times, found the sap to differ in taste, even in the same stalk very much; one part was sweet while the other part was insipid. Each time we examined it, we found the sweet sap advancing toward the top, and when it reached that point it commenced to show blossom. When the stalk was in bloom ten days, we had it cut in three-quarter lengths by the New York Plow Co's Cyclo-Ensilage Cutter, conveyed to the silo by an elevator, having two men in the silo treading it down. The sheathing around and above the silo, on the Mills plan, is nine feet high, which allows for packing. It would require more if not well packed while being filled. When full, which took four days, we put on a layer of salt hay about an inch thick, when pressed; over that we placed 2-inch plank, then we used 25 tons of "kentledge iron," for a compression, on the 200 square feet of silo surface.

This we had done the first week in September. We opened it on the first of November, and found the salt hay an injury to it, as it seemed to mould the ensilage, the dry hay absorbing the juice out of the corn and causing it to decay, damaging two inches of ensilage. Except this, our loss was not over one per cent. The first two days I fed it, the cattle did not eat it greedily, but before the week expired they would leave good upland hay, to eat ensilage. During the winter I had it fed to cows, calves, hogs and poultry; all seemed to like it. One of our Guernsey calves was so delicately constituted that the herdsman had to give it nourishment out of a bottle. We thought it would surely die. Under those circumstances, we tried the ensilage by putting a little of it in the calf's mouth. To our astonishment, she commenced to eat it, and grew strong and healthy on it. That winter there was an

increase of milk, and the butter was much yellower than on previous ones. In the spring the cattle were all healthy and in good condition.

In the summer of 1881, we built another silo of the same capacity—about four thousand cubic feet of compressed ensilage. Those walls were made of bricks and Portland cement, 12 inches thick, having the stone foundation of the barn on three sides, and the stone wall of the other silo to support the fourth brick wall. Those walls were left unfaced with the cement, but we found it injurious, as the bricks absorbed some moisture and the ensilage stuck fast, preventing it from packing. That year we planted seven acres of southern corn, in rows $2\frac{1}{2}$ feet apart, and filled both silos. This time, instead of using salt hay as before, we spread six sacks of common salt, which proved very satisfactory, having no loss whatever—the salt even preserving it a brighter green. Our experience in feeding that winter was just as satisfactory as that of 1881, which confirmed my belief in its nutriment as a fodder.

In 1883, we experimented with sorghum, planting two acres, and found its yield one-third less than that of corn. We had it kept separate in the silo. When we opened it and first saw it, we thought it was an improvement on the corn, on account of its greenness; but there was more woody fibre, a vinegar taste and a stronger smell, and the cattle did not eat it so greedily.

The silos were covered and weighted as formerly, except putting some dry earth on top of the planks, which we found beneficial. Our method of taking it out of the silo during those years, was by cutting it in four-foot benches with a hay-knife, allowing the pressure to remain on the other part. This system of taking out we abandoned, as we found out that the air affected the face of it, especially in warm weather. From November, 1883, until July, 1884, all our animals were stabled, and fed on ensilage and ground feed, allowing four quarts of ground feed (composed of equal parts of corn meal, wheat bran, middlings and oats) and 55 pounds of ensilage for each full-grown animal for 24 hours.

Having now fed it four consecutive years, we have yet to find out any bad effect from using it, but everything in its favor as a profitable food, having fed 20 animals for

six months on the produce of $3\frac{1}{4}$ acres. When we consider the advantage of storing so much food in so small a space, with the fact that the butter production is increased and is of a brighter color, its utility seems established. We weighed a cubic foot of ensilage taken from three different depths of the silo, *top, centre and bottom*. The top foot weighed 57 pounds; centre, 55 pounds, and bottom, 53 pounds—showing conclusively that, if the silo is water-tight, and enough pressure on it, the liquid will come to the top, if any liquid is there. During the past season, we have divided the silo into four parts, uncovering all of one section to feed from. This obviates the difficulty of having the surface too long exposed, as we take from it every second day, and it is in no way injured by exposure. It also saves labor, being much easier taken out.

JOHN JOHNSTON.

Ensilage in England.

A fine display of ensilage formed a part of the recent Smithfield, Eng., live-stock show. There were 330 entries from all parts of the kingdom, and representing ensilage from corn, clover, various grasses, hop-vines and other substances. The specimens were received in sample boxes two feet in length, so that when sawn asunder a clean sample of a cubic foot might be untouched, while the dual specimen could be pulled to pieces and otherwise examined. The specimen of hop-vine ensilage is believed to be the first of the kind ever made. The silos were filled with rye and rye grass, with a little clover at the top, meadow grass, clover sweepings and hop-vines. With the exception of the contents of one silo, the whole of the produce was cut with a steam chaff cutter, the hop-vines being cut two inches in length. The ensilage turned out sweet, and on some being given to cattle, they ate it greedily, notwithstanding they had but a short time before had their mid-day meal.

English farmers are enthusiastic on the subject of ensilage. At a recent competitive exhibition of the products of silos at Smithfield, there were no less than 330 entries. One particular point in favor of the silo is that it takes away much of the terror of a wet hay-time. A Scotch farmer gives a glowing account of its benefits in this re-

spect. This year his grass was cut and carted during a heavy rain, part of it lay under the water, and the men were obliged to remove their shoes and stockings while working, the water literally pouring from the cart as it went along. An old building, which had stood useless for years, had been converted into a silo, and into this the grass was put. The farmer is now using it as ensilage; it is of a bright green color, and the cattle eat it with relish.—*Mirror and Farmer.*

Tobacco.

Prepare the land intended for this crop as early as possible, by deep plowing, harrowing, manuring with well rotted stable manure, or some fertilizer rich in potash and sulphuric acid. Plaster and saltpetre, well mixed, three parts of the former to one of the latter, and sown broadcast at the rate of two bushels of the mixture to the acre, is also a good fertilizer for this crop. If the ground be cloddy, roll and harrow until the whole is well pulverized and fine as an ash bank; then lay off the hills and "scrape," as short a time as you can well calculate before a rain when you expect to plant; after which, give constant attention to this crop which is inexorable in its demand for work and care.

The Wastes of the Household.

While the well known saying that a French family could live with elegance on what an American housewife throws away is frequently illustrated in families where waste can be ill afforded, it is also true that, in eight cases out of ten, this relegation of cold bits to the offal pail or ash barrel is not caused so much by extravagance as by the lack of knowledge of how to dispose of them in any other way. The dainty utilization of scraps is a subject that well repays the thoughtful study of any housewife, and even the least original cook can often "evolve from her inner consciousness" an appetizing dish from cold fragments that at first sight appear utterly unpromising. In this matter, however, the mistress must generally depend upon her own brains. Few hirelings have the keen interest in their employers' welfare that would urge them to save a couple of pennies here and five or six there. Fewer still, with the best intentions in the world, *know* how to do it

or appreciate that is in the minor economies that true saving consists. What difference does it make if those scraps of cold bacon left from breakfast are summarily disposed of in the swill barrel, or if that bit of corn beef—too small to appear on the table again—is bestowed upon the first basket beggar who presents himself? And if these escape that fate from the extra conscientiousness of the housekeeper, they are too often converted into the ubiquitous hash. Hear how one careful housewife disposed of similar remnants: To the corn beef and bacon, minced fine, she added half as much cold mashed potato, one raw egg, a little chopped onion and parsley, and with croquettes made of these, rolled in flour and fried in nice dripping, provided an appetizing dish that was quite sufficient, when accompanied by stewed potatoes and bread and butter, to make a lunch for three people. Another dainty dish, which appeared upon a friend's table, was formed from even less promising materials. Her dinner the day before had been a stuffed chicken boiled with rice. Examination of the pantry revealed the carcass of the fowl, with one leg attached to it, and a couple of spoonfuls of the cold rice. Nothing daunted, however, the valiant housekeeper advanced to the charge, and, with the aid of a small, sharp knife, removed more meat from the bones that one would at first have believed possible. This was cut—not chopped—in small pieces and set aside with the rice and half of the dressing, while the bones, the rest of the stuffing, and a little minced onion were put over the fire in two cups of cold water. When a slow, steady simmer of a couple of hours had reduced this one-half, it was cooled, strained, skimmed, and slightly thickened with browned flour, then returned to the fire with the fragments of meat, rice, etc., brought to a boil, poured over crustless squares of fried bread laid in a hot platter, and garnished with parsley. The result was a savory salmi, whose scrappy origin no one would have suspected.—*Christine Terhune Herick, in Good Housekeeping.*

Housewife's Delight.

Every housewife should be in possession of the "Housewife's Delight," a large, durably bound and neatly printed compilation of over 1,000 receipts and hints for the home. 1,000,000 already sold. Only 50 cents each or 5 for \$2 00. See advertisement in another column. Published by B. K. Focht, Lewisburgh, Pa. m3m

Planting and Cultivating Corn.

Of course this crop has been planted and up, but it is not yet by any means too late to plant, even a late-maturing variety, on rich and properly prepared land. Indeed we would say that a better crop is likely to be made, planted between the 1st and 10th of June, on thoroughly cultivated land, than on ill-prepared, at a much earlier period of the year. It was once a boast to say, "I am ahead of all—I've planted my corn," no matter how slovenly. Now, no matter how late it may be, it is gratifying to have it said that "corn is planted late, but it has been planted on well prepared land and cannot fail to produce a good crop." If your corn has been properly planted and has been harrowed with a smoothing harrow until it is too tall for the use of such an implement, put to work the sharp, "iron cultivators," and with them stir the ground every week until the corn is laid by. Level culture has been found best for this crop, as it does not destroy the roots as the plow does. Sow broadcast one or two bushels of gypsum per acre over the crop when knee high, and at the last working sow cow peas so as to be covered by the cultivators on going through the corn the last time. This crop of peas will keep down grass and weeds, not hurt the corn crop, and be a good green manuring to benefit the succeeding small grain crop which usually follows corn. P. P.

The Education of Farmers.

The professions of Law, Medicine and Divinity are often termed the *learned* professions, to distinguish them from the ordinary occupations of life. This must at present be the object, for certainly as much learning is requisite in other departments of life as in these. Undoubtedly in the years gone by, this title may have been more applicable than now. Then, learning in every other sphere of life was at a discount, and anyone who could read and write was supposed naturally to be allied to one of these professions. Now the common affairs of life require the application of such scientific principles, that the "learned pro-

fessions" are in a vast minority. The civil engineer is the peer of any class; while the architect and the electrician are forced to put into practical form a fund of information seldom to be found in the other classes even at their best. The farmer should also rank among these: for the best cultivation of the soil requires a large and comprehensive knowledge of many departments of learning and skill. Anyone can scratch the ground and put in seed; but to make farming a genuine success, worthy of manhood, as a pursuit for one's life, much more than this is needed. The farmer is the greatest chemist on the face of the earth, and he should be in the perfect realization of that fact, by his personal knowledge of the principles of chemistry involved in his farming operations. He needs also a familiarity with mechanical appliances in all their manifold relations to practical work; while botany, and zoology, and mineralogy belong to him as to no other class.

We have often had occasion to ask ourselves, how any one, who is surrounded so completely by these branches of learning; having them constantly pressed upon him in season and out of season; can be satisfied to move along without some direct attention to them? It is true we have the acquaintance of a very large number of farmers, who enjoy a wide range of knowledge and are perfectly at home when any of these subjects come up for discussion; but we are acquainted with many others who are indifferent to these things and care very little about informing themselves. We believe the farmers of our country should receive an education specifically adapted to their work, and should pride themselves upon the fulness of their knowledge in reference to every department of farm life. No class of our countrymen are less fitted by education for the business of life at this present time than are farmers; and no class have so much resting upon them as to the future good of our country. Their facili-

ties should be a hundred fold better than at present to secure the best results for all concerned. It is true we have our Agricultural Colleges with their professors and students, and they are doing an excellent work as far as they can reach ; but in every rural district we should have farmers' children taught the principles which lie at the foundation of the farmers' work, and thus be fitted for an understanding prosecution of the profession of agriculture, when the time comes for them to preside over the destinies of our country. The education of the farmers in the future will determine in great measure the prosperity of our land. We hope the time will come when agriculture will take its place among the learned professions, and when a farmer will be one, who not only scratches in the dirt, but who, with large heart, and well informed mind, and broad outlook, can give an intelligent reason for every move he makes and for the grand life he is living amid the works of nature, himself the noblest work of all.

Capital.

Many farmers are necessarily obliged to raise money either for the purchase of their farms, or after purchase to carry on their plans of work successfully. In this way they fall into the hands of capitalists to a certain extent, and the old question comes up between capital and labor even at the door of the farmer. We are among those who believe that all good things may be perverted if placed in the hands of unscrupulous men ; but we believe that capital in the hands of an honorable man is a good thing working out good to all concerned. We have known cases which seemed hard and not justifiable by any process of reasoning, where capital was unworthily used to oppress others ; but we have also known many cases where capital has proved the blessed relief of distressed and anxious

men, even when let at such an interest as would at first appear unwarrantable. We cannot therefore be placed among the class who are at all inclined to denounce those who are favored with riches ; nor do we believe it wise to condemn those who are forced to borrow and who are rigidly punctual in making payment of principal and interest on whatever sum may be borrowed and just as may be agreed upon between the parties. Still, we would advise farmers to borrow as little as possible, to pay as soon as possible, and never borrow as long as it is possible to get along without doing so. So much for money capital.

The farmer's great capital is brains and muscle. These are worth everything to him in his labor. No money can take the place of these ; and no interest anyone can pay him would be usurious, if he loaned this kind of capital. Let the farmer make the best use of his brains first, last, and all the time, and let his labor of muscle be to supplement the work of his brain. Men who have exercised their brains most are the best farmers. They have the largest capital, and put it to the best use. They stand always as examples to be followed, so far as practical agriculture and successful farming are concerned. This is the capital, then, we recommend without qualification. Let everyone enjoy it and make the most of it.

Cultivating Corn.

Corn is one of the most important of farm crops. It is always in demand, and with favorable conditions can be easily grown. A good sandy loam is favorable to the growth of the corn crop, if in a good state of fertility, and unless a soil is reasonably fertile, it should be made so by the application of manure or fertilizer of some kind. It is not profitable to attempt to grow corn upon a poor soil. Corn planting should not be hurried until spring is so far advanced that the earth is reasonably dry and warm, and then the plowing should be done, harrowing if necessary to produce a

proper degree of pulverization, and combine any manure or fertilizer that may be applied with the soil.

Mark off the rows the required distance apart and plant the seed, using a little phosphate in each hill as a sort of stimulant. As soon as the shoots have attained sufficient height so that the rows can be easily distinguished, use the cultivator and hand hoes to clean out about the hill and add fresh earth. The more the cultivator or horse-hoe can be used the better for the crop. It used to be believed when the work was done by hand that three times hoeing were absolutely necessary, but with the introduction of labor-saving machinery there is a tendency to neglect culture which is an important factor of success.

Columbia, Conn. WM. H. YEOMANS.

Live Stock Register.

Holstein Cow "Rhoda."

We present to our readers this month an illustration of the prize cow Rhoda, No. 434, H. H. B., one of the prize cows of the prize herd of Mr. F. C. Stevens, of Maplewood Stock farm, of Attica, N. Y.

Bred By Thos. B. Wales, Jr., Iowa City, Iowa; calved Nov. 30, 1875. Sire Roland, No. 144, H. H. B. Dam Texelaar 8, No. 55, H. H. B., out of Texelaar, No. 51, H. H. B., by Zuider Zee 2nd, No. 57, H. H. B.

Color, black and white; white band over left shoulder, black saddle, white band over hips, black patch on rump; legs, belly and two-thirds of tail white.

Head and horns very fine, neck thin, well set on shoulders; back level, rump square, limbs short and small in bone, and extensive milk veins. An animal very attractive, possessing unusual merits. Her record for one year is 14,297 $\frac{3}{4}$ pounds of milk, and now stands at the head of Mr. Stevens' prize herd of Holsteins, since he had the misfortune to lose his famous cow Echo, who has the largest milk record of any cow. His farm at Attica, N. Y., is devoted solely to the raising of Holsteins, his herd

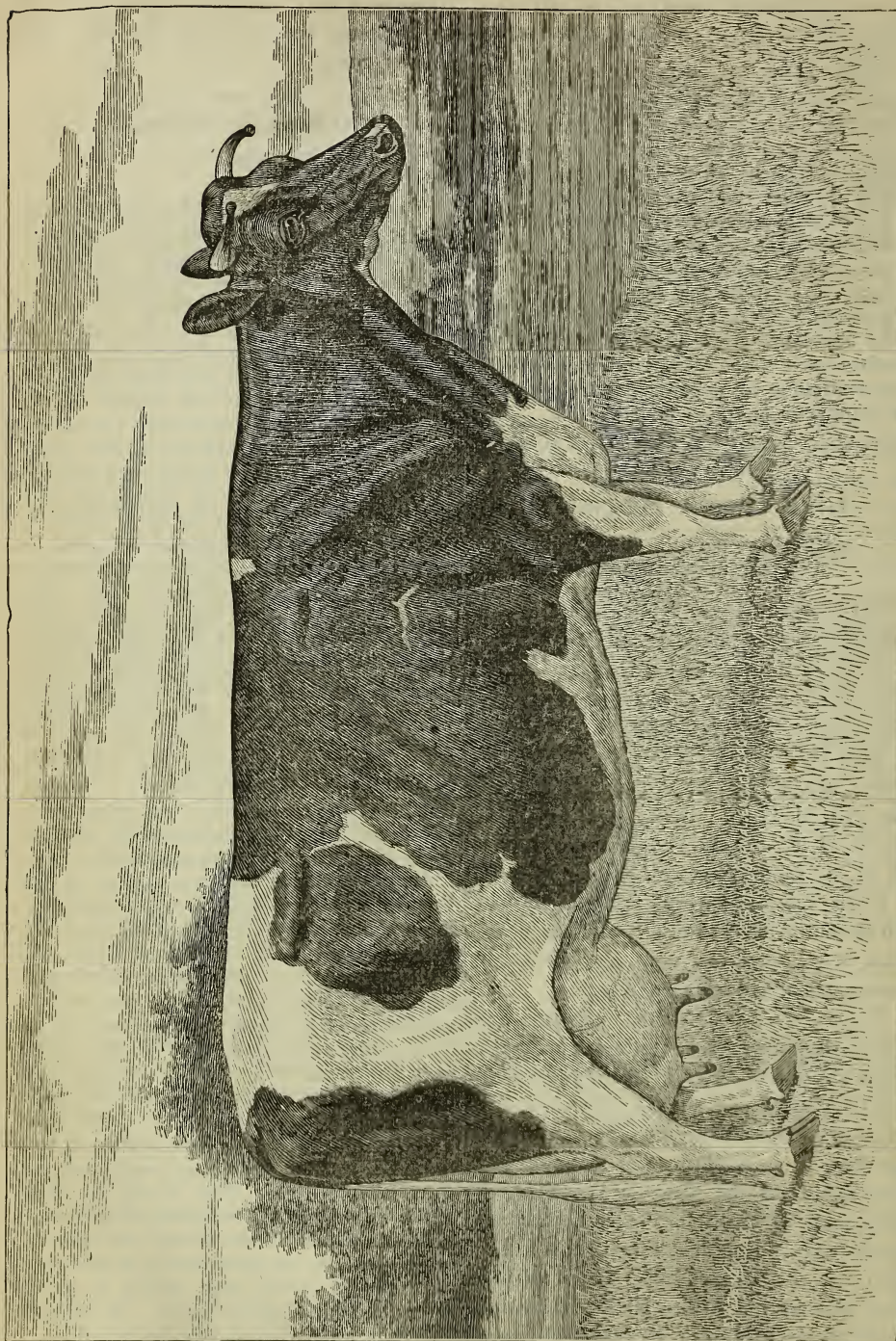
consists of fifty animals at the head of which stands the fine imported bull "De Joustier Steir."

Whipping Horses.

From the Farmers' Advance.

The whip is the parent of stubbornness in a high spirited animal, while gentleness will win obedience and at the same time attach the animal to us. It is the easiest thing imaginable to win the affection of animals, and especially of horses. An apple, a potato, or a few lumps of sugar given from the hand now and then, will cause the horse to prick up his ears at the sound of his owner's footsteps, not with fear, but with a low whinnying note of pleasure. The confidence of the noble beast thus gained will lead him to obey the slightest intelligent tone of voice or indication of the bit. There is no such thing as balkyness to be found in a horse thus treated; he shows a desire to obey, whereas a few lashes of the whip, smartly applied, if he be a horse worth having, will arouse in him a spirit of retaliation and stubbornness that may cost the owner hours of trouble and possibly danger to life and limb. Horses are made gentle by kindness. They "believe" in the master they love, and his voice will calm them in a moment of fear, or induce them to struggle forward even when overlaid, and when a whip would be sure to bring them to a stubborn standstill.

No man knows the true value of his horse until he has won his regard and confidence, as it were. The whip will never do this. A kind hand and gentle voice will act like magic; thus we have known women who could handle and drive horses that would almost invariably show some vicious traits in the hands of a male driver. These facts apply especially to the rearing and training of colts, something which the Arabs understand better than we do. They do not 'break' their colts, they adopt them; they fondle them from their birth and pet them always. An Arab would as soon strike his wife or his daughter as his horse; and no animals in the world are fleetier, more enduring or more docile in the performance of every task which is given them than the Arabian horse. We would like to see the whip wholly discarded.



Holstein Cow "RHODA," No. 434, H. H. B.
Property of Mr. F. C. Stevens, Maplewood Stock Farm Attica, New York.



A STANDARD MAGAZINE,

DEVOTED TO

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Oldest Agricultural Journal in Maryland,
and for ten years the only one.

EZRA WHITMAN, Editor and Proprietor.

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One Young America Corn and Cob Mill, warranted first-class in every respect, price \$40.00, will be given for 25 new subscribers to the MARYLAND FARMER one year.

Surroundings of Baltimore.

Many readers at a distance are desirous of having some idea of the surroundings of Baltimore, which they have pictured to themselves as differing materially from those of other large cities. It is very true that the surroundings of each—New York, Philadelphia, Chicago, Cincinnati, St Louis, New Orleans,—are peculiar in their attractiveness and the interest they excite. Among these Baltimore has its peculiarities, also. Within a radius of 2 or 3 miles, the land is dotted with country seats belonging to wealthy citizens of Baltimore, which are surrounded by large tracts of fertile lands, either under high cultivation, or still preserved in the condition of the original forest. In this belt are to be found, also, many public parks, including Druid hill park, the Cemeteries, the Water Works, and a vast number of beautiful building localities to be occupied in the future, as taste may arrange them, when the present large land-owners shall have concluded to place them in the market. Our attention was especially directed to this subject during a visit we have recently enjoyed to the beautiful country seat of the late John W. Garrett, and as our eyes roamed over the undulating surface of the country, and took in the capacities of beauty and usefulness spread out before us, we could not help realizing how very great was the attraction for suburban residences in the immediate vicinity of Baltimore. We were obliged to conclude that no city surpassed our own in these respects; as well as the evident healthfulness of localities, the land being often quite elevated and always subject to natural drainage. Mr. Garrett's farms consist of 2,012 acres of fine land, including several tracts of original forest lands heavily timbered, while the mansion is surrounded by extensive and beautiful lawns, with all the accompaniments which wealth and skillful help can bring towards the embellishment of

such an establishment. And yet among the many items of interest of this greatly interesting place his immense stables in which are housed nearly a hundred horses, including his valuable Arabian stallions, his breeding mares, his colts and his stud of pure blooded driving stock are conspicuous. These have the attendance of many skilled horsemen, and the whole farm is in charge of Joseph Cobb, who seems to understand perfectly how such a mammoth establishment should be managed. We were attracted also by the appearance of a splendid flock of superior South-down Sheep—a round 100 of them—and should the lambs by chance wander to the stalls of our Lexington Market, they would be a sight to brighten the eyes of the epicure.

In this establishment, as in the B. & O. railroad, everything is carried forward strictly "on time;" and we are admonished that our time is up. But we enjoyed our brief visit exceedingly and thus place it with our impressions on record.

The Management of Agricultural Fairs.

What is the object of all Agricultural Societies and their Exhibitions? and how can Agricultural Fairs be best managed to secure the success of this object? These should in reality be the most prominent questions in the mind of those who have charge of our agricultural societies and who preside over these exhibitions; but in reality, the great question seems to have been, how to manage the exhibitions so as to gain the most money, and make the whole thing financially successful! This, too, with little regard to the improvement of the agricultural interests of the country. In what we shall say in this article, we would by no means reflect upon the character or standing of those who decide upon the management of these exhibitions, for so far as we know they are upright and honorable men;

yet we must be allowed to speak our mind plainly upon one part of this management which has become a scandal to all honest and upright visitors to our Fairs. We refer now to the permission given to gambling booths, to demoralizing, or even indecent, side shows, and to immoral and disgusting exhibits such as too frequently shock those who with their children happen to attend these gatherings. The permission is of course bought from the management, and so adds to the income financially; but it is a fearfully great mistake upon the part of those who rule our fairs, and one which can and should be corrected. After one experience of these things on the part of intelligent, moral families, can you expect them willingly to allow their children to be drawn into the toils of gamblers and unprincipled knaves, and submitted to the wiles of lascivious exhibitions a second time? For our part, we have but very little doubt of the fact that many a young man has received his first lessons in gambling at these agricultural fairs.

We know from an unusually extensive discussion of this subject, that no good citizen approves of this wicked management, and that no amount of money can take the place of the actual loss in moral stamina which these deceptive side shows and these gambling stands have occasioned.

It is hardly necessary to mention how these things have detracted from the real purposes of our fairs. The object is to benefit the agricultural community by making the people acquainted with the best improvements in all the different departments of farm life. But these side shows have become the leading feature, and occupy the attention of the people to the exclusion of the most important portions of the exhibitions. They have the attraction that accompanies all nauseating, disgusting and immoral scenes in our human affairs. People flock to see a great criminal, or any horrible and unnatural freak of animal life,

or any mysterious deception practiced by unprincipled sharpers; and the real exhibitions which show the progress of those who stand in the front ranks of the farm life and which would bring a large return to those who would examine them, are passed by with scarcely any attention.

Now we are not disposed to accuse anyone with intentionally ministering to the depraved appetites, nor to the actual promotion of the practices of the gambling fraternity. We are well satisfied that they have been led into these things by the false idea that only in this way could the financial success of these exhibitions be secured. It only remains that in the management of the fairs to come, these things be corrected. Let us have a radical change. Let us see no more of these permits to the low side shows to the gambling stands, to the almost licentious exhibits which have destroyed in great part the value of our fairs; and which have deprived them of the patronage of many of the best families of the best class of our citizens. We call for a reform, a radical reform. Let those who have charge show a nerve which will prevent others from being subjected to influences, against which they would themselves jealously guard their own children. We publish now, that we may in time bring this subject to the notice of those who have the management. And we represent only the mind of hosts of honorable and influential citizens.

Agricultural Convention.

By circular received from the Department of Agriculture, a convention is called to meet in Washington on the 24th of June at 10 A. M., to be composed of delegates from the various Agricultural Colleges and Experiment Stations of our country, to take into consideration the many relations of these institutions to the Department, to organize harmonious action in reference to Congressional aid to agriculture, and to

arrange for uniformity in the methods of carrying out such experiments as may be deemed valuable to the farming interests. We hope the convention will be one of the solid steps towards the dissemination of a higher standard of agricultural knowledge which shall benefit all parts of our country; and we trust that our colleges and experiment stations will send their strongest and best men to consult on the topics mentioned in the circular, and to suggest any other subjects relating to the advancement of agriculture, which can receive the attention of the general government, at the suggestion of the Agricultural Department. We think this is a movement in the right direction; only see to it that it is not a convention merely in name; but that it results in some definite good.

The Vegetable Garden.

To produce as early as possible vegetables of all kinds is the desire of every farmer, but to accomplish this, is not always the result of too early planting. While planting at an early date may be desirable, it cannot be depended upon to produce early vegetables; but if the soil is warm and well worked over, planting may be performed, the seeds will quickly germinate and grow rapidly, if the soil possesses the proper degree of fertility. In a vegetable garden a high degree of fertility is desirable as this will aid in the rapid growth of the vegetables which is an element that adds much to the excellence of the same. Unless the soil is dry and reasonably warm it cannot be thoroughly pulverized which is necessary in order to secure a good seed bed. The finer the soil the better the seed bed, and the seed, even the smallest, will thus come almost wholly in contact with it and its germination will be hastened.

The tendency to throw out roots is encouraged by this close contact of soil and thus the feeding grounds of the roots will

be enlarged which will assist in the more rapid development of the vegetable itself.

This pulverized condition of the soil should be fully maintained throughout the growth of the plant and this can be accomplished only by frequent stirring of the soil, but there is no labor upon the farm that pays better than attention to the vegetable garden.

Important Work for June.

The farmer, and especially the tobacco planter, considers June as a very important month in the year. And the horticulturist and market gardener look to it with great interest. This season of the year decides many hopes and prospects as to several crops of the future.

The fruit grower now has his hopes fulfilled or blighted. This month brings into certainty the amount of strawberries and small fruits he may calculate upon. It tells him what he can rely upon as to the amount of the peach crop and other large and later fruits, it also fully discloses the extent of damage he has sustained by frost, curculio and other enemies to his fruit trees.

It is this leafy, rosy month that inspires the farmer with hopes of hot suns for his corn, light breezes and gentle showers to hasten the ripening grain and aid the young crops in their growth, while the tobacco planter prays for favorable seasons to set out his crop on which he has built all his hopes for a high reward of trial and care.

PLANT LATE POTATOES THIS MONTH.

Select medium sized or large potatoes for planting. Experiment shows whole potatoes yield more merchantable potatoes than when they are cut as is usual. It takes more seed but the additional yield well repays. The potato loves a deep, moist, rich soil, frequent culture and freedom from grass and weeds. This is a paying crop always, at even 40 cents per bushel, if it is properly planted and judiciously managed.

The labor expended on this crop is less and the profits greater than any crop we know as a rule. But it requires rich or good soil and an abundance of suitable manure or fertilizer adapted to the special wants of this plant or tuber as it more properly should be called.

ROOTS.

The beets, carrots and mangels are we presume, not only up and growing, but ready to be thined and vacant places in the rows replanted and the whole been worked over and had a dusting of plaster, ashes and sulphur or soot well mixed together. Yet it is not too late to sow the seeds on well prepared ground, if done very early in the month. Ruta-baga should be sown in drills by the 20th. of the month. Do not neglect this important crop. The baga is invaluable for sheep especially and other stock in winter and spring for feed. They keep remarkably well when even buried in heaps or trenches in the open grounds.

SHEEP.

This is the usual time for shearing-sheep. Let it be done by men who know their business if not by regular experts. These poor animals often suffer much unnecessary violence and cruelty at such times. See that they are kindly treated, and after being shorn, each one should be dipt in a tepid bath of tobacco water to effectually destroy ticks, lice and other vermin. Tar each nose well with Carolina tar; point the mark designed for each and turn out into the sunlight on a clean sward or pasture new. Save all the best ewes and ewe lambs as future breeders, and the rest of the flock mark for sale, as soon as fit.

"Fearless" Threshing Machine.

We call the attention of farmers and threshermen to the advertisement of the celebrated "Fearless" Threshing-machine, elsewhere in this paper. Unparalleled honors have been bestowed upon this machine, at fairs and exhibitions, State, National and International. And, as equally good and reliable evidences of superiority have been given, by the highest authority, times without number, persons desirous to purchase will do well to consult the manufacturer of the "Fearless," MINARD HARDER, Cobleskill, N. Y.

Fodder Corn.

Very few Southern farmers, comparatively speaking, know the value of corn fodder. As a soiling crop for milch cows and other animals, it is excellent, but unfortunately, not many know the value or importance of substituting the soiling system for wild pasturage and wilder cattle upon the commons. Lands at present are too abundant and too cheap for soiling to gain many advocates.

But as a forage crop of quick growth to bridge over the usual shortage of old forage in August and September or as a winter forage there is nothing better then sowed corn. We say sowed corn because we prefer it broadcast to drilled as the latter is apt to grow too woody and hard to make first rate feed. Sowed about the first of June, it will be ready to cut and cure by the first of August, and will be sweet and nice fodder, and with a little caution in feeding it will be most acceptable and nutritious feed for horses, mules, milch cows, etc.

If wanted for winter forage however, it should be allowed to stand longer than the first of August, say till the end of that month, to attain more size and better development of fibre. But in no case should it be allowed to reach full maturity and hardness of stalk. To prevent its growing too large and coarse, sow it thick. It should be cut before the nubius begin to form, say as soon as the first tassels appear. Try it once, and we think you will like it ever after. For winter forage it may be sown after oats.

B. W. J., Va.

Fruit upon the Farm.

At the present time, with the knowledge, or the opportunities for knowledge in the direction of fruit culture, and the innumerable number of varieties of all kinds to select from, there is hardly a reasonable excuse for any farmer for not having what would be necessary for the demands of an ordinary family. There is no royal road to success in the line of small fruit culture as many have supposed and which has deterred them from making the effort of cultivation. A comparatively few hills of raspberries will produce a good supply in

their season and can be easily cultivated; the same can also be said of strawberries; twenty five plants set out and given a small amount of attention, sufficient to keep clean, will produce a good supply of fruit especially if the Crescent is employed. This variety will almost take care of itself. Blackberries may also be grown by a little attention, and this is no more than must be expected, because there is very little that is desirable that does not cost some effort to procure and small fruits are no exclusion to the general rule.

Home Comforts.

How much of the happiness of our lives depends upon the comforts of home; and with what a slight effort can these comforts be secured by the most of our readers. They consist almost entirely of small things which, by themselves, cost little, but which add much to the enjoyment of our lives and make up in good part the character of living. Neatness, cleanliness, good food, pleasant words, a cheerful smile, an affectionate heart make home a place of delight where we linger with contentment, and around which will always cluster the fondest memories, if we ever are forced to be away from it. But there is something besides these virtues which adds a large degree of happiness to our homes. What a source of pleasure it is when the rooms we daily occupy are pictures of comfort by their simple but appropriate furnishing and embellishment, instead of being the barren and carpetless abodes which too often salute us in our country dwellings. It is a sad fact that many of our prosperous farmers look upon books, magazines, pictures and furniture as of no value to them; when in fact these things are the source of a great amount of peaceful joy to everyone, making for every family an additional attraction to home—the center around which the hearts of all will love to cluster as the years roll by. It is true much of the pleasure of the far-

mers home will consist of a proper attention to its surroundings; the beauty of the flower garden and the abundance of small fruits, the neatly kept door yard, the shade of thrifty shrubbery, or the general aid of refinement which these exhibit. But these other things should have a reasonable share of attention also, and we hope no reader of ours will forget how much good a small sum thus expended will accomplish for a family.

We mentioned "carpetless abodes," and perhaps the greatest outlay is in this direction and very many hesitate to buy carpets, because they are under the impression that the cost is so great that they will be unable to obtain what would be necessary for a fair outfit. This however is not the case. In almost every town or city you will find some dealers on whom you can depend, who care much more for their reputation and honest business standing than for the few dollars they would make from a single customer. In Baltimore, McDowell & Co., Baltimore street opposite Hanover, are such dealers, of long standing and perfectly reliable. Visit such, tell them how much you wish to spend and the room or rooms you wish carpeted, and their facilities are such that they can surprise you with what they will offer for your acceptance within the sum you have named to them. We give you this only as one instance; for in every other department of home comforts, the same plan can be followed by you, and you can very soon surround your family with such sources of contentment and happiness that home will always be to them the pleasantest place on God's footstool, and you yourself will never have cause to regret the few dollars thus expended.

THERE is a way to enrich our lands; that is by ploughing often and raising clover, and all of us can keep more stock and make more manure if we will only try. We can increase our forage crops each year by a little calculation beforehand.

Farm Topic.

Farm work in Eastern New York is now (May 16,) rapidly progressing, but the season has thus far been cold and late. A year ago the 29th of this month we had a frost that killed all the fruit, rye and grass, nearly. There is now a good prospect for all these crops. Fruit trees are blooming full.

Flat furrows in plowing are nice to look at, but that's all. It is not the way to plow. Set the furrows on edge, or on an incline, and so admit air and warmth to the seed bed. Reversing the sod or surface soil so decidedly will do for premium plowing on the fair ground, where it is not essential whether there are crops or not.

Some recommend milking the cows at noon as well as morning and night in the flush season of feed. There are one or two objections; first, the inconvenience and loss of time, unless a man is kept for the sole purpose. Again, the cow requires all the heavier feeding to meet this additional draught on her milk-producing capacity.

Of all deplorable things it is most so to see editors of agricultural journals "pitching into each other" on every provocation, one twitting the other of not being original, and the other responding that the opposition paper is run by a man who doesn't know a ruta бага from a parsnip. Readers get tired of this sort of thing. Are not all agricultural journals working together to instruct and elevate the farmer and to make money? There are both laudable purposes. Each journal has a field which no other journal can precisely occupy; let it be content! We are glad to say the *Maryland Farmer* is wholly free from this thing.

J. W. D.

The Balto. Sun's 49th. Anniversary.

We well remember THE SUN from its early youth until now. We have taken it regularly for a period of forty three years and can testify to its age to that extent of time. We are happy to say, that during all that time it has been a well managed and interesting sheet; but never more so than to-day. It has passed through many severe crises in our country's history; but has steadily grown in appearance, in size

and in intrinsic value. May it long continue to shine for the good of all, and may Abell be able to see it flourish for years to come.

Silk — Mulberry — Catalpa.

TO ED. MARYLAND FARMER:

It is gratifying to see the articles on silk and mulberry, by MISS ROSSITER, in the last *Maryland Farmer*. The subject richly deserves wider and more general attention. The growing of mulberry trees is no more difficult than raising of peach trees; and the production of silk worms and cocoons, in the family, is little or no more difficult than honey or sweetmeats, and can be made very profitable in almost any family which has even an acre or two of land. Besides, mulberry trees, growing about the household are both ornamental and useful; they make an excellent and durable timber; while the berries make nice conserves.

A kin to this subject, is the *growing of timber*, generally; our country is suffering in health and financial loss from the depletion of forests, from laying the whole surface bare; causing more injurious results from drought. Everywhere there should be a more extensive planting of timber and nut trees; it will be as profitable, and more healthy, than the loaning of money; for, it is well known, in almost every section, that the annual growth or increase of young timber is equal to 10 to 12 per cent. per annum.

One of the best kind of trees to grow—and not generally known and appreciated—is the *Catalpa*: There are two varieties, both of great value, the best one, in general opinion, is the *Catalpa bignonioides*; it is the finest grower and is hard, durable timber, for fence posts and railroad ties; besides being capable of a high finish for ornamental furniture. In the West and South—West it is being much used for inside finish of cars and furniture as well as for road ties. It grows rapidly, and will last as long as any locust or cedar, and is a handsome tree for shade.

The two kinds both have fine blossoms, fragrant and beautiful, and they bloom about two weeks apart, the earliest having the largest and darker colored flowers; but the two give bloom for a full month. Too many of this valuable tree

cannot be grown for the health, comfort and profit of our rural districts; and if these few lines shall induce any of our people to increase their timber growth, I shall have done them, at least, some benefit. More timber should be grown in our country.

D. S. C.

Freedom, Carroll Co., Md. Sept. 12.
Mess. R. J. Baker & Co., Baltimore, Md.

Gentleman:—After having used your pure fine ground bone and pure dissolved bone for two years, I take pleasure in stating that it has given entire satisfaction. I drilled 350 pounds to the acre, one-third raw and two-thirds dissolved, on a field of fifteen acres, and in the summer it gave me 37½ bushels per acre. Sowed my entire crop with your bone, about 380 lbs. per acre, mostly corn stubble. From these lands I thrashed 32½ bushels per acre. I do not think it had more straw than I had from other fertilizers, but the yield of wheat from the use of bone was greatly increased. I will also state that I have never failed to get a good set of grass. On all other crops I find it equally good.

Wm. T. Devries.

The Southdown Sheep.

For his mutton qualities the Southdown excels all other sheep. In this respect it has long been held in the highest esteem, and by its standard as a mutton sheep are weighted the merits in this direction of every new aspirant to public favor. A near approach to the Southdown in the quality of mutton is considered high praise in any other breed of sheep. Some writers have suggested that this unsurpassed excellence of the Southdown for mutton has been reached at the sacrifice of the wool producing capacity. However, we find that the Southdown originally shearing two to three pounds, and later three to four pounds, now not unfrequently produces a fleece of from ten to thirteen pounds; and good-sized flocks are known to average fleece of eight or nine pounds each. The wool, besides being abundant, is of medium fineness and usually finds ready sale at good prices. In certain other desirable qualities the Southdown have no superiors; as for example in their hardihood, their docility, their early maturity, and in the ewes being

prolific and careful mothers. Not the least among the causes of their great popularity is the commanding beauty of their form. No other breed of sheep can approach them in this regard.

It is not claimed that the Southdown is suited to every farming locality within the bounds of civilization, but it is believed to adapt itself to a wider range and greater diversity of soil and climate than any other breed of sheep.

In parts of the country where an open range for sheep can no longer be had, the Southdowns are rapidly growing in favor. In Central Illinois, for example, where, in the days long gone by, Merinos were kept by the thousands on the broad prairies, but where now farmers must keep their sheep on their own lands, and in consequence reduce the size of their flocks, depending for profits on the production of mutton as well as wool, the Southdowns have become the popular and profitable sheep.

The growing demand for mutton in this country is leading American breeders to use Southdown blood on their flocks to a greater extent than ever before, and doubtless the taste for good mutton will greatly increase as markets become better supplied with mutton of the highest quality.—*Phil. Thrifton in Breeders' Gazette.*

How to Preserve Fences.

There are several methods of preparing fence posts for the purpose of increasing their lasting qualities. It has been learned by experience that posts thoroughly seasoned when set will outlast those put into the ground when the wood is green, and it has also been proved that those set with the tops in the ground will remain sound long after others from the same quality of wood set with butts down have decayed. Charring the ends of the posts set in the ground drives out the sap contained in the wood, and closes the pores so as to prevent the moisture in the soil from penetrating it. This is probably the cheapest method known, and has proved very satisfactory. A paint composed of linseed oil and finely pulverized charcoal is very highly recommended. To prepare this put a quantity of oil in a strong kettle, place over the fire and let it remain until it boils, then stir in the rharcoal until it is as thick as ordinary paint, and apply a liberal coat to the posts.

Coal tar is used by some instead of linseed oil, equal parts of pulverized charcoal and quicklime being used instead of charcoal alone. The proportions recommended are five gallons of coal tar to one pound each of finely pulverized charcoal and freshly slacked lime. The coal tar should be brought to a boiling heat in an iron kettle, when the charcoal and lime should be added. Apply while hot, either with a brush or by dipping the posts into the mixture.

THE POULTRY-HOUSE.

For the Maryland Farmer.

Chapters on Chickens.

BY EXPERIENCE.

CHAPTER VI.

COOPS AND YARDS FOR SITTING HENS AND FOR BROODS.

1 I have found the old triangular shaped coop with some modifications, the very best coop for general purposes, and the cheapest.

2 Make it of half inch boards just as they come from the mill. The whitewash, sulphur or carbolic powder will stick to them better than if planed.

3 If of half inch boards they will be light and can be handled much better than if made of inch lumber.

4 They are made without any bottom for sitting hens, the object being to have sitters' nests on the ground.

5 The sides, backs, and fronts are made each in one piece; then put together with screws, so that they can be taken apart and put away in the flat. If the coops are made alike and all of the same size it is a very great convenience.

6 The sides and backs are made solid; or a door may be made in the back and a pane of glass in one side of some of them if desired by you. The front will be made of slats on a frame; with an extra frame for the front of wire net, for protection during the night.

7 For sitting hens the sides and back are lower than the front, as the soil is raised considerably in the coop above the level outside.

8 On these sides, below the frame for the front slats, cleats are arranged for a

sliding bottom, when the coops are used for the broods. This sliding bottom enables you to clean the coop every morning with very little trouble, while the mother and her young chicks are enjoying their feed in a corner of the yard.

9 Dimensions.—The sides are 2 feet wide and 2 feet 6 inches long; the front an equilateral triangle with 2 feet sides; the back corresponds with the front, but is 4 inches deeper, the same as the sides; the frame for wire net corresponds with the front. The sliding floor should be fitted to run easily on the cleats, and to extend beyond the front a few inches. One of the slats in front is movable for a door.

10 The materials for such coops cost no more than the most common boxes. It is a little trouble in the beginning to make them; but when once made they will last for years, and they are splendid for use.

11 As for yards, I have found it advisable to have the yards for sitting hens away from the flock, so that they will not be disturbed by layers, and never receive the attention of the cock.

12 I build the outside fences the same as for the regular flocks, omitting the house and shed. I then divide each of these large yards so that I have a 3 foot passage the whole length. The 9 foot part is divided into 8 small yards, 3 x 9, and in each of these I place a coop for the sitting hen. A door leads from the passage into each yard.

13 The inside fences are one foot solid and four foot of laths above. When used for broods the one foot solid keeps the chicks of each brood for some time within suitable limits so that they will not stray, and get punished as strangers by the adjoining mother hen.

14 In building these yards the doors open above the solid part of the fence, so that the front is as stiff as any other part of the fence.

15 I build as many such yards as may be used for all my sitting hens and broods of chicks. On paper it looks like an extensive work. In reality the cost is very small and the work but a trifle.

16 These yards can always be made useful, when they are not needed for sitters or for broods, practically they soon become the most valuable portion of your domain. They sometimes contain your choicest specimens; or they may be your fattening

department; or your hospital; or your cullings in the fall; or your cockerels for sale; or your specially nurtured ones for the Exhibition room. With me they have proved an institution I cannot spare.

Buff Cochins.

In the interest alike of your pursuit and mine, I send you for illustration a group of thoroughbred Orange Buff Cochins. In

stalwart stock was buff, yet several gray ungainly bastard breeds came straggling out of chaos and intruded themselves under the name of "Chitagongs," but soon were civilized and married and merged into the great and governing Shanghai family. Thence the Buff Cochin descended down to us, enthusing on either shore a furore and fever for "the great fancy fowl." Furnishing thus the blood of royalty to every Brahma and breathing into every other



ORANGE-STRAIN-BUFF COCHINS.

Owned and bred by Dr. T. B. Spalding, Edwardsville, Ind.

what I shall offer in compliment of these beautiful creatures, I trust I shall not trespass nor inflict an odious philosophy on any, while *outlining* the lineage of these beautiful birds. It is more than probable that the origin of these Asiatics ante-dates even that uncertain era where history is lost in the twilight of fable. The grand old shanghais are the one unclouded star that beams brightly forth from the fog and divides the darkness of fable from history's first fair morning.

The legitimate color of this ancestral

Asiatic the breath of life. The Buff Cochin above and beyond all others is a *pure and prized* thoroughbred. Descending from itself it is "wrapped in the sublime solitude of its own originality."

I scarcely need say that we worship at the shrine of the ancient "bird of paradise," as you here behold him under the new dispensation under the baptismal name of "Orange Buff Cochin." We commend him to your kindly consideration, cut down from his original altitude, spread out, and yet condensed, enlarged in every direction,

grandly gilded and greatly improved. And now I shall trust that you will pardon me if I repeat what I have elsewhere said in compliment of these favorite Cochins. I regard the Buff Cochin as the most beautiful, and in every sense the equal of any pure-bred fowl. Hardier than any other Asiatic, they challenge universal favor on the score of color. The Buff is not tarnished at every touch like White, nor breaks the even beauty of flock by the different color of the sexes like parti-colored birds; nor does the Buff converge upon itself the cruel rays of heat like Black, but like that grand celestial, golden loveliness with which the *Infinite Artist* paints the poetry of nature in the sublimity of autumnal sunset, a strictly Standard Orange Buff Cochin affords, in fact, the most peerless and perfect, rich and rare "blending of every creature's best." Nor does the Buff Cochin rank below the best in any form of merit. They are indeed a stately, strong and splended breed, combining beauty in fullest measure with every known quality of actual utility. Yours fraternaly,

T. B. SPALDING, to Poultry Monthly.

Caponizing—How it is done.

Strange as it may seem, we have met with a number of ordinarily intelligent persons who supposed a Capon to belong to a distinct race of fowls, as do Games, Bantams, etc. For fear that others may have a similar notion, it may be well to say that a Capon is an altered male fowl, and bears the same relation to other fowls that an ox does to a bull, a wether to a ram, etc., and may be produced from any breed of fowls. A capon brings in market 50 per cent. more than an ardinary fowl, and often double the price of common male birds; besides, a capon will reach double the weight of a common fowl at the same age. As there is no difficulty whatever in caponizing, and the instruments cost very little, the practice might become very general. Having practiced the operation for several years, the writer can truly say that by using no more care and with no more skill than are needed in operating upon a male pig, not more than one out of 30 or 40 fowls need be lost. For several years the writer has operated on from 12 to 30 fowls each year, and the loss during that time has not been more than five or six

birds in all. The operation is best performed on chickens about 3 months old, although it will succeed, if carefully done, with the majority of fowls when they are 10 or 12 months old. As with many other operations, this is one that can be learned most readily by seeing it done, and we advise those who would undertake it to procure instruction wherever it is available. Still if one has a little confidence, he will meet with success if the directions here given are carefully followed. In the first place, a table is needed in which a few screw rings are inserted at convenient places; these are furnished with broad tapes, by which the bird is kept fast. It is better that beginners should practice on birds prepared for cooking. Lay the dead bird upon the table, dispose it as hereafter described, and then place the screw where they would be needed to secure a live fowl. One or two will be required to hold the wings, and one for each leg; six will be all that will ever be necessary. Place the bird upon the table, and fasten it down upon its left side, where the rings and tapes are. The spot where the opening is to be made is just above the hip joint and a little below the back. The exact spot for the incision will be discovered by dissection of a dead chicken. Here the feathers are plucked, and an opening is made through the skin with a pair of long bladed sharp pointed scissors. We have found these better than a knife. The skin is drawn to one side, and an opening is made with the scissors between the last two ribs for an inch and a half in length, great care being taken not to wound the intestines. The ribs are then separated by the spring hooks, so as to expose the inside. The intestines are gently moved out of the way with the handle of a tea spoon, and the glands or testicles will be seen attached to the back. The tissue which covers them is torn open with the hook, aided by the tweezers. The gland is then grasped with the forceps, and the cord is held by the tweezers. The gland is then twisted off by turning the forceps, and when this has been done the other one is removed in the same way. Care must be taken not to injure the blood vessel which is connected with the organs, as this is the only seat of danger in the operation, and its rupture will generally be fatal. The hook is then removed, and if the skin has been drawn backwards at the outset it will now slip

forward and cover the inner skin which covers the intestines, and close the opening. No stitching is needed. A few feathers are drawn together on each side of the opening and plastered down upon the skin with the blood, where they will dry and form the best possible covering to the wound, which will heal at once. The bird should be fed with very soft bread and milk for a few days after the operation, but should have a plenty of water. For two nights and one day before the operation, no food nor water should be given to the birds; this will greatly facilitate the work and reduce the chances of loss. The operation after a few successful trials, may be performed in less than one minute, and by the use of the rings and tapes, no assistance is needed. Capons may be made to earn their food by fostering young chicks, to which business they take very kindly. To bring them to their full and most profitable size, they should be kept until the second year. By giving them corn meal steeped in warm, milk and provided a warm house, they will grow during the whole winter, and their flesh will become very white, sweet and juicy. A good Capon of Light Brahmas will weigh 12 to 15 pounds, at 22 months old, and will bring at the holiday season \$2.50 to \$3 each. The instruments above described are to be procured of H. H. Stoddard, Esq., Hartford, Conn.

EDS.—By request we re-publish the above article as it appeared in our May number 1879.

HORTICULTURE.

For the Maryland Farmer.

Hardy Roses.

June roses are likely to be June roses this year with us, though frequently in this latitude the best bloom comes in May. It is our purpose in this article to treat of the hardy roses which make so gorgeous a display at this season. Most of these roses belong to what is known as the Hybrid Perpetual class, an unfortunate name however for our climate as few of them can be depended upon for more than one bloom, although many sorts if well treated will give a few flowers in autumn. We like the French name of Remontant for this class of roses better than the English one

of Hybrid Perpetual. If growers could only be content with one magnificent June bloom, and grow their plants solely with this view just as they do Rhododendrons and other choice plants which bloom but once a year, there would be far more satisfaction with these magnificent flowers. But every one wants roses which bloom all the time, and when a florist honestly tells a purchaser that a variety blooms but once, it is generally condemned without further parley. One of the most perplexing matters with which a florist has to deal is the constant inquiry for a white rose that will bloom all the time, and which is perfectly hardy. It is perfectly useless to tell the ladies that no such rose exists. They will go at once and buy from the first fellow that is unscrupulous enough to assure them that the plant he sells them will meet all their requirements. "What is the best white rose for a cemetery?" is the inquiry constantly propounded. To this I have uniformly answered *Madame Plantier*. This is as hardy as any rose in existence, is dwarf and compact in its habit, and nothing can exceed the snowy abundance of its June bloom. But this is its only bloom, and it honestly spends the rest of the summer in maturing growth for another show next season. It is classed by Nurserymen as a Hybrid China rose. The popular Jaquiminot or "Jack" rose of the cut flower trade is a Remontant and rather more tender than many others of this class. We do not consider it a first class rose for out-door planting as its flowers are not double enough and are therefore shortlived. The buds of course are very handsome. There is nothing more difficult than to name the best sorts of Remontant roses, because there are so many varieties of almost equal excellence that one is at a loss which to omit in making a reasonably short selection. Now is the time to make a proper selection of varieties for future planting. Visit the grounds of some florist who makes a specialty of them while they are in bloom out doors and note the sorts which strike your fancy. This will prove much more satisfactory than depending upon catalogue descriptions at planting time. As this is not planting time I will only name a few of the best Remontants. I only name those which are old and well tried. Paul Neyron, deep rosy pink, one of the largest roses in existence. Prince Camille de Rohan, very dark

crimson, one of the best autumn bloomers. Mad. Charles Wood, bright rosy crimson, one of the best bloomers. La France, a beautiful peach-blossom pink, the best of its class for blooming but being crossed with the tea rose is not so hardy as the others. Genl. Washington, deep rich crimson, very large and double. But we might go on indefinitely with this lovely class of roses and then leave out some of the best. In making out a list of hardy roses do not forget the many handsome climbing sorts if you have a place for them. To our taste the improved Prairie Roses which had their origin here in Baltimore are unexcelled among the climbers. And arbor or pillar covered with a large plant of "Queen of Prairies" in full bloom is a sight not soon forgotten. These Prairie roses are also very useful for prolonging the season of hardy roses, as they bloom later than the Remontants. At this season the most important point in connection with out-door roses is the proper method of treating them after blooming. It is always better when time and labor can be spared to cut off the blooms as fast as they lose their beauty. This involves so much time and attention that it is apt to be neglected at this busy season. In large gardens it is usually impossible. Whenever this can be done, and attention is paid to pinching and stopping shoots that are growing too rank, the Autumn bloom will be much finer. But the principle necessity of hardy roses is thorough and persistent cultivation through the summer season, so as to keep up a good and uniform growth, which is so essential to the production of fine flowers. If the soil is not already very fertile, heavy manuring is essential to success. When you buy roses of these hardy varieties it is always better to get them either from the open nursery in autumn and plant at once, or, to get pot grown plants in spring that have not been forced into bloom. The roses which look so gay in the market stalls in spring are then at their best and the purchaser need not expect any more roses until next year, should the weakened plant live that long. Therefore it is always best to select your roses in the nursery in June and have them marked at once for fall delivery. I have frequently been asked to name a perfectly hardy yellow rose. The well known yellow briar rose, "Harrisonii" is of course well known and the only other good yellow

rose we know is the Persian yellow, a very hardy rose, but one that is almost impossible to propagate from cuttings, so that it is always sold budded on manilli stocks. And here let me say that as a rule always get your roses on their *own roots* and thereby save yourself the everlasting bother of keeping down the suckers which spring up all around from the wild stocks on which roses are budded or grafted. In another article I will give my method for growing and wintering the tender ever blooming roses. We have done small justice to the hardy sorts but the limits of a magazine article will not permit us to treat them as fully as we would like.

W. F. Massey.

The Corn Crop.

The season for making a crop of corn is at hand and as this important plant is a rapid feeder of carbonic acid, *i. e.* a grain that feeds largely upon the elements of the air, namely, water and carbonic acid, it is of the utmost necessity that the soil should be kept in a porous, open condition, so that there will be a free circulation of air and moisture to meet the thousands of fine shooting roots extending in every direction. A crop of corn, say of fifty bushels, will need at least 6000 to 8000 lbs. of organic matter in stalk, cobb, grain and leaves, and this secured in 90 days, showing the importance of an abundance of plant food being near at hand. In all this organic matter but little of mother earth, or the immovable elements, are needed, such as phosphorous, potash, lime, etc. The bulk of this as well as all other plant food is drawn from the air, and to secure this large supply of carbon (the uncrystallized diamond) found in the above amount of organic matter, an immense amount of air must be furnished. Every pound of carbon will exhaust 7000 pounds of air, and as more than half of all organic matter is carbon, it will be seen how much is necessary to supply a crop of corn with plant food. In a rich black soil there is always found abundance of carbonic acid from the decay or oxidation of the vegetable matter which also keeps the sand and clay in a porous condition; hence there is not that constant attention needed as is the case when land becomes exhausted of this generative force, and to assist the plant the agency of human power is needed, and

there can be no surer way of assisting the plant than by constantly keeping the soil well stirred in the beginning so that when the roots begin their work they will find air and moisture with a *little ammonia*, to furnish the small amount of nitrogen necessary, and this small amount is constantly being supplied along with carbonic acid and water to make up the 6 or 8 thousand pounds before mentioned. Few farmers but what know the effect of the harrow, cultivator or plow on young corn, but few think that tillage means manure for the land, simply by allowing the great elements of plant life to reach them through a porous soil. No fertilizer on corn will take the place of human muscle, and let the word be work, work, work; and 200 or 300 pounds of a good mixture of acid, phosphate and kainit will help to make up the amount of food; but remember, the bulk comes from the air and adopt every available means to induce the earth and air to join hands to give animal food, and the surest way is to get them together, and you have the means of doing it through a porous soil. A. P. S.
Rock Hall Md.

The Tide Marshes of the United States.

BY D. M. NESBIT.

DEPARTMENT OF AGRICULTURE.

Just now, when public attention has been drawn to our Maryland marshes by the able paper thereon by Dr. Chancellor, read at the Farmer's Convention in February last the above work from the Agricultural Department is of special interest. The subject of embanking lands from the sea is treated under nine different heads—as follows:

- I. Objections
- II. Conditions and methods of profitable re draining.
- III. A general survey.
- IV. Management of re drained lands.
- V. Legislation.
- VI. Areas, by the Coast Survey.
- VII. The tide lands of Nova Scotia and

New Brunswick.

VIII. The tide lands of Washington Territory.

IX. Correspondence by counties.

The work is quite an interesting epitome of the history of diking lands with detailed accounts of the dikes of Nova Scotia and New Brunswick when the enormous rise and fall of the tides (60 feet at Bay of Fundy) renders the thorough drainage of protected lands more easy than in the case of our Cheseapeake lowlands where two or three feet rise and fall are all to be had usually. One error, which we noticed in Dr. Chancellor's paper, we do not find here. The Doctor stated that our great salt marshes in the lower part of the Eastern Shore made the neighborhood malarious and unhealthy. Now there is no fact better known to those who are acquainted with all parts of the Eastern Shore than that these *salt* marshes are notoriously healthy and no more robust and healthy people are to be found than those who reside on the little strips of uplands which are found along the water-side of these marshes. It is well known that Kent County, which has less marsh than any of the lower counties, and none that can be called strictly *salt* marsh, suffers more from malarial fevers than any of the lower counties. The line on the Eastern Shore where malarial fevers are most common is found at the points on bay and rivers where the influx of salt tide water is arrested by the fresh water from above, making the water brackish. This line crosses the bay just above the mouth of the Chester River and runs down the shore crossing the rivers at the points indicated and making a strip of malarious region several miles wide. Places immediately on *salt* water on the Eastern Shore are not troubled with malaria and the probable result of an effort to dyke and reclaim the great *salt* marshes, would be for a time a large increase in malarial fever. So far as the health of the Eastern Shore is con-

cerned the drainage of the *fresh water* swamps and ponds of the interior is of far more importance than the reclaiming of her *salt* marshes. Nevertheless the banking and drainage of these marshes is a matter of the greatest importance to the agriculture of these regions. In the lower part of Somerset County, in what is known as Potatoe Neck, some attempts have been made at embanking the lands and with the best results. I know of one piece of marsh land in that neighborhood that within three or four years after being banked produced a spontaneous growth of clover amid the marsh grass, where, before banking and drainage, was a bottomless bog. The principal difficulty in the way of getting these lands in cultivation is the tough and enduring nature of the salt turf which takes a number of years to decay after it is broken up. But simple drainage and embanking will usually make them the best of grass lands as soon as the salt is washed out. The reclaiming of these marshes is a matter of which should have speedy attention at the hands of our Legislators.

Mr. Nesbit's compilation is the most valuable contribution on the subject of Tidal Marshes which we have yet seen, and those intending to make experiments in this direction ought to procure it at once.

The American Fruit Culturist.

BY JOHN J. THOMAS.

WM. WOOD & CO., PUBLISHERS, NEW YORK. \$2.00.

All fruit growers will welcome the appearance of a new edition of this standard work on fruit culture. The fact that it is the nineteenth edition is of itself a strong evidence of the value of the book. We know of no other work on fruits that conveys so much information of value to the novice within the same compass. The chapters on propagation, transplanting, cultivation, gathering and marketing are very full and

profusely illustrated. The descriptions of varieties and plates of fruits are full and accurate. The work is not a mere reprint but bears evidence on every page of careful revision. A feature in this edition is the compact "Index of fruits" in the shape of an appendix which brings the list of fruits down to the present and includes all the new sorts of acknowledged value.

The Publishers have done their part well and the book is handsomely printed on fine paper and well bound. When the fact is considered that it is a volume of nearly 600 pages with 519 wood cuts its price is remarkably low.

Change of Time.

This circular received just as we are going to press:

U. S. DEPARTMENT OF AGRICULTURE,
Commissioner's Office,

Washington, D. C., May 23rd, 1885.

DEAR SIR:

A sufficient number of favorable replies having been received to my last circular, to indicate a decided preference for the date of July 8th for holding the Convention of Agricultural Colleges and Experiment Stations, I have to inform you that such date has been finally determined upon. This will not only not conflict with the commencement exercises of many of the Colleges, but will also offer to those desiring to attend the Convention of the National Educational Association at Saratoga on July 14th, an opportunity to attend both Conventions without too much loss of time.

I am endeavoring to perfect an arrangement with the Pennsylvania Railroad Co. by which all those arriving here by that line can have reduced rates to Saratoga. Of this, and of arrangements for hotel accommodation, you will be informed in due time.

Very respectfully,

NORMAN J. COLMAN,
Commissioner of Agriculture.

Is This Possible!

Report comes that General Grant's improved condition is due to the fact that he is using a "simple vegetable preparation" forwarded by one of our consuls from South America, and sent him by the Surgeon General! Is this possible! By an unauthorized remedy? Shocking!

And yet, if this "simple vegetable preparation" were owned and advertised by any one as a specific for this terrible disease, certainly the Surgeon General would not commend it, nor would bigoted physicians prescribe it!

Nevertheless, it is a fact that many of the best proprietary medicines of the day, as the late Dr. J. G. Holland stated in *Scribners' Monthly*, were more successful than many physicians, and most of them, it should be remembered, were at first discovered or used in actual medical practice. When, however, any shrewd persons, knowing of their virtue and foreseeing their popularity, secured and advertised them, then, in the opinion of the bigoted, all virtue went out of them!

Isn't this absurd!

We believe that a remedy, if properly made, is just as effective when put up, advertised and sold in bulk, as when doled out to patients at enormous expense by their physicians.

Why not?

If General Grant is getting better through a simple unauthorized vegetable preparation where is the vaunted exclusive skill of the medical profession!

Apropos of the suspension of some very prominent members by the Medical and Chirurgical faculty of Maryland, for endorsing advertised remedies, the *Baltimore American* (April 25) says that "when a patent medicine goes on year after year widening its circle of believers, it is a pretty fair evidence that there is merit in it. The regular doctors may ignore it, and expel any of their members who use it, but when they do so their action looks more like envy against a successful remedy than a true desire to protect the public." The failure in the Garfield and Grant cases, the *American* thinks, and properly, has knocked professional pretensions higher than a kite.

But this is not a singular instance of unprofessional power over "incurable diseases." That "simple vegetable preparation" now everywhere known as Warner's safe cure, was once an authorized remedy; was pronounced a "god send" to the medical profession for the cure of kidney and liver disorders, malaria, general debility, spring feebleness, female irregularities, etc., by many leading physicians, but when the formula was fully perfected, and the medicine was put up in bulk and advertised so that every sufferer might know of it and treat himself, then the profession turned upon it and let their patients die rather than to use it!

This is certainly a strange proceeding, but it is on a level with all the rules and regulations of a code which has gone so far as to forbid a physician displaying beyond a certain size his name and profession upon his sign!

But the world moves, and merit wins the fight!

Books, Catalogues, Etc. Received.

RECEIVED from E. B. Emory, catalogue of his fourth annual sale of pure blooded stock, to take place at his farm, "Poplar Grove," on the 11th of June. This is an excellent opportunity for farmers in Maryland and adjoining States to improve their herds.

THE *Jersey Bulletin* published every Wednesday, a neat, sixteen-page journal, printed on tinted book paper, is on our table. The *Bulletin* is devoted wholly to Jersey Cattle, is ably edited by D. H. Jenkins, of Indianapolis, and Prof. A. S. Heath, of New York City, assisted by Rev. Ross C. Houghton and Mr. Thomas A. Loyd. Subscription price is \$2.50.

WITH its usual promptness *The Southern Cultivator* for May is on our table. The marked improvement of this issue is a source of congratulation to its friends. Hon. W. J. Northen, a gentleman of culture, with the May issue becomes managing editor.

TALES FROM MANY SOURCES.—We have received from Dodd, Mead & Co., the publishers, the 2nd volume of "Tales from Many Sources." In binding, type, paper and general appearance this is a counterpart of vol. 1; but it contains two more articles, making seven in this volume, all from the most popular authors of England; and each rich in interest for those who would be entertained for an hour or two of leisure. These volumes are for sale in Baltimore by Cushings & Bailey, at 75 cents a volume.

"COUNTRY HOMES AND THEIR IMPROVEMENT," by Daniel Ammen, published by I. Shillington, Washington, D. C. Price 25 cents.—Our thanks are due to the distinguished author, Admiral Ammen, for a copy of the neatly printed and well written treatise. It is a most seasonable little book, containing much valuable matter. While it pictures the beauties of a rural retreat for all dwellers in a city, it points out the many grave mistakes to be avoided by the purchaser of a sub-urban cot. It contains admirable advice as to the ornamentation of the grounds, making good roads, rustic bridges, drainage, building and preparing carp ponds and the uses of such ponds, planting trees and hedges, fences, etc. It is, indeed, a valuable work for every holder of a country house. Its style and composition are worthy of so eminent a scholar and writer, and is worth infinitely more than the price.

E. B. EMORY, of Poplar Grove Stock Farm, has sold his 3-year-old bay stallion Cypress, by Cyclops 2.27, dam Fannie Fern 2.32½ by Geo. M. Patchen, Jr.

This colt has a 2-year-old record 2.46½, and trotted at Belmont Park the day before he was sold in 2.38½, driven by W. W. Bair.